# SLOVENSKI STANDARD
# SIST EN 62598:2013

**01-oktober-2013**

**Nadomešča:**
**SIST EN 60405:2008**

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**Jedrska merilna oprema - Konstrukcijske zahteve in razvrstitev radiometričnih merilnikov**

Nuclear instrumentation - Constructional requirements and classification of radiometric gauges

Strahlungsmessgeräte - Konstruktionsanforderungen und Klassifikation radiometrischer Einrichtungen



Instrumentation nucléaire - Exigences de construction et classification pour les jauges radiométriques



**Ta slovenski standard je istoveten z:** **EN 62598:2013**

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**ICS:**

27.120.01 Jedrska energija na splošno Nuclear energy in general

**SIST EN 62598:2013** **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 62598

August 2013

ICS 27.120

Supersedes EN 60405:2007

English version

# Nuclear instrumentation - Constructional requirements and classification of radiometric gauges

(IEC 62598:2011)

Instrumentation nucléaire - Exigences de construction et classification pour les jauges radiométriques (CEI 62598:2011)

Strahlungsmessgeräte - Konstruktionsanforderungen und Klassifikation radiometrischer Messanordnungen (IEC 62598:2011)



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CENELEC

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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**



Ref. No. EN 62598:2013 E

## Foreword

This document (EN 62598:2013) consists of the text of IEC 62598:2011 prepared by IEC/TC 45 "Nuclear instrumentation".

The following dates are fixed:

| | | |
|---|---|---|
| • latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2014-07-22 |
| • latest date by which the national standards conflicting with the document have to be withdrawn | (dow) | 2016-07-22 |

This document supersedes EN 60405:2007.

EN 62598:2013 includes the following significant technical changes with respect to EN 60405:2007:

– Introduction of Category C for stand-alone source housings intended for fixed radiometric gauges and associated test procedures.

– The system classification code has been amended by one digit indicating the applied revision of EN 62598 and by a second digit indicating the fire test conditions.



– The term dose rate class shall be used instead of radiation protection class. Class 7, or alternatively E, represents the current ICRP regulations.



– Introduction of fire resistance classes.

– Revision of the procedure for dose equivalent measurements.

– Addition of Annex A (informative) "Guidelines for the installation of radiometric gauges".

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

## Endorsement notice

The text of the International Standard IEC 62598:2011 was approved by CENELEC as a European Standard without any modification.

# Annex ZA
(normative)

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

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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.

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| IEC 60050-394 | 2007 | International Electrotechnical Vocabulary - Part 394: Nuclear instrumentation - Instruments, systems, equipment and detectors | - | - |
| IEC 60476 | 1993 | Nuclear instrumentation - Electrical measuring systems and instruments utilizing ionizing radiation sources - General aspects | - | - |
| IEC 60692 | 1999 | Nuclear instrumentation - Density gauges utilizing ionizing radiation - Definitions and test methods | - | - |
| IEC 60846-1 | 2009 | Radiation protection instrumentation - Ambient- and/or directional dose equivalent (rate) meters and/or monitors for beta, X and gamma radiation - Part 1: Portable workplace and environmental meters and monitors | - | - |
| IEC 60846-2 | 2007 | Radiation protection instrumentation - Ambient- and/or directional dose equivalent (rate) meters and/or monitors for beta, X and gamma radiation - Part 2: High range beta and photon dose and dose rate portable instruments for emergency radiation protection purposes | - | - |
| IEC 60982 | 1989 | Level measuring systems utilizing ionizing radiation with continuous or switching output | - | - |
| IEC 61005 (mod) | 2003 | Radiation protection instrumentation - Neutron ambient dose equivalent (rate) meters | EN 61005 | 2004 |
| IEC 61010-1 + corr. May | 2010 2011 | Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements | EN 61010-1 | 2010 |
| IEC 61326 | Series | Electrical equipment for measurement, control and laboratory use - EMC requirements | EN 61326 | Series |
| IEC 61336 | 1996 | Nuclear instrumentation - Thickness measurement systems utilizing ionizing radiation - Definitions and tests methods | - | - |
| ISO 361 | 1975 | Basic ionizing radiation symbol | - | - |
| ISO 921 | 1997 | Nuclear energy - Vocabulary | - | - |

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| ISO 2919 | 1999 | Radiation protection - Sealed radioactive sources - General requirements and classification | - | - |

IEC 62598

Edition 1.0 2011-03

# INTERNATIONAL STANDARD

## Nuclear instrumentation – Constructional requirements and classification of radiometric gauges



INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRICE CODE T

ICS 27.120

ISBN 978-2-88912-421-3

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

# NUCLEAR INSTRUMENTATION – CONSTRUCTIONAL REQUIREMENTS AND CLASSIFICATION OF RADIOMETRIC GAUGES

## FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62598 has been prepared by IEC technical committee 45: Nuclear instrumentation.

This standard cancels and replaces the second edition of IEC 60405, issued in 2003. It constitutes a technical revision (see Introduction).

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

| FDIS | Report on voting |
|---|---|
| 45/718/FDIS | 45/721/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.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

# INTRODUCTION

This International Standard is based on the second edition of IEC 60405 which was published in 2003. It modifies or supplements it with additional provisions, where required by current needs.

Compared to the second edition of IEC 60405, the following major changes have been made:

– Introduction of Category C for stand alone source housings intended for fixed radiometric gauges and associated test procedures.

– The system classification code has been amended by one digit indicating the applied revision of IEC 62598 and by a second digit indicating the fire test conditions.

– The term dose rate class shall be used instead of radiation protection class. Class 7, or alternatively E, represents the current ICRP regulations.

– Introduction of fire resistance classes.

– Revision of the procedure for dose equivalent measurements.

– Addition of Annex A (informative) "Guidelines for the installation of radiometric gauges".