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**Jedrske elektrarne - Merilni, nadzorni in elektroenergetski sistemi - Zahteve za preskušanje elektromagnetne združljivosti (IEC 62003:2020)**

Nuclear power plants - Instrumentation, control and electrical power systems - Requirements for electromagnetic compatibility testing (IEC 62003:2020)

Kernkraftwerke - Elektro- und leittechnische Systeme mit sicherheitstechnischer Bedeutung - Anforderungen für die Prüfung der Elektromagnetischen Verträglichkeit (IEC 62003:2020)

Centrales nucléaires de puissance - Systèmes d'instrumentation, de contrôle-commande et d'alimentation électrique - Exigences relatives aux essais de compatibilité électromagnétique (IEC 62003:2020)

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NORME EUROPÉENNE  
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**prEN 62003**

May 2020

ICS 27.120.20

English Version

**Nuclear power plants - Instrumentation, control and electrical  
power systems - Requirements for electromagnetic compatibility  
testing  
(IEC 62003:2020)**

Centrales nucléaires de puissance - Systèmes  
d'instrumentation, de contrôle-commande et d'alimentation  
électrique - Exigences relatives aux essais de compatibilité  
électromagnétique  
(IEC 62003:2020)

Kernkraftwerke - Elektro- und leittechnische Systeme mit  
sicherheitstechnischer Bedeutung - Anforderungen für die  
Prüfung der Elektromagnetischen Verträglichkeit  
(IEC 62003:2020)

This draft European Standard is submitted to CENELEC members for enquiry.  
Deadline for CENELEC: 2020-08-06.

The text of this draft consists of the text of IEC 62003:2020.

If this draft becomes a European Standard, 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.

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Ref. No. prEN 62003:2020 E

## European foreword

This document (prEN IEC 62003:2020) consists of the text of document IEC 62003:2020, prepared by IEC/SC 45A "Instrumentation, control and electrical power systems of nuclear facilities"

This document is currently submitted to the CENELEC Enquiry.

The following dates are fixed:

- latest date by which the existence of this document (doa) dor + 6 months  
has to be announced at national level
- latest date by which this document has to be (dop) dor + 12 months  
implemented at national level by publication of an  
identical national standard or by endorsement
- latest date by which the national standards (dow) dor + 36 months  
conflicting with this document have to be withdrawn  
(to be confirmed or  
modified when voting)

As stated in the nuclear safety directive 2009/71/EURATOM, Chapter 1, Article 2, item 2, Member States are not prevented from taking more stringent safety measures in the subject-matter covered by the Directive, in compliance with Community law.

In a similar manner, this European standard does not prevent Member States from taking more stringent nuclear safety and/or security measures in the subject-matter covered by this standard.

## Bibliography

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

CISPR 11	NOTE	Harmonized as EN 55011
IEC 61000-2-2	NOTE	Harmonized as EN 61000-2-2
IEC 61000-4-25	NOTE	Harmonized as EN 61000-4-25
IEC 61000-6-2	NOTE	Harmonized as EN IEC 61000-6-2
IEC 61513	NOTE	Harmonized as EN 61513
IEC 61800-3	NOTE	Harmonized as EN IEC 61800-3

## Annex ZA (normative)

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

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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	-	-
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 61000-4-8	-	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	-
IEC 61000-4-9	-	Electromagnetic compatibility (EMC) - Part 4-9: Testing and measurement techniques - Impulse magnetic field immunity test	EN 61000-4-9	-
IEC 61000-4-10	-	Electromagnetic compatibility (EMC) - Part 4-10: Testing and measurement techniques - Damped oscillatory magnetic field immunity test	EN 61000-4-10	-
IEC 61000-4-11	-	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase	EN IEC 61000-4-11	-
IEC 61000-4-12	-	Electromagnetic Compatibility (EMC) - Part 4-12: Testing and measurement techniques - Ring wave immunity test	EN 61000-4-12	-

## prEN IEC 62003:2020 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-13	-	Electromagnetic compatibility (EMC) - Part 4-13: Testing and measurement techniques - Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests	EN 61000-4-13	-
IEC 61000-4-14	-	Electromagnetic compatibility (EMC) - Part 4-14: Testing and measurement techniques - Voltage fluctuation immunity test	EN 61000-4-14	-
IEC 61000-4-16	-	Electromagnetic compatibility (EMC) - Part 4-16: Testing and measurement techniques - Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz	EN 61000-4-16	-
IEC 61000-4-17	-	Electromagnetic compatibility (EMC) - Part 4-17: Testing and measurement techniques - Ripple on d.c. input power port immunity test	-	-
IEC 61000-4-18	-	Electromagnetic compatibility (EMC) - Part 4-18: Testing and measurement techniques - Damped oscillatory wave immunity test	EN IEC 61000-4-18	-
IEC 61000-4-20	-	Electromagnetic compatibility (EMC) - Part 4-20: Testing and measurement techniques - Emission and immunity testing in transverse electromagnetic (TEM) waveguides	EN 61000-4-20	-
IEC 61000-4-28	-	Electromagnetic compatibility (EMC) - Part 4-28: Testing and measurement techniques - Variation of power frequency, immunity test	EN 61000-4-28	-
IEC 61000-4-29	-	Electromagnetic compatibility (EMC) - Part 4-29: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests	EN 61000-4-29	-
IEC 61000-4-34	-	Electromagnetic compatibility (EMC) - Part 4-34: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current more than 16 A per phase	EN 61000-4-34	-
IEC 61000-6-4	-	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments	EN IEC 61000-6-4	-
IEC 61000-6-5	-	Electromagnetic compatibility (EMC) - Part 6-5: Generic standards - Immunity for equipment used in power station and substation environment	EN 61000-6-5	-
IEC 61000-6-7	-	Electromagnetic compatibility (EMC) - Part 6-7: Generic standards - Immunity requirements for equipment intended to perform functions in a safety-related system (functional safety) in industrial locations	EN 61000-6-7	-
IEC 61226	-	Nuclear power plants - Instrumentation and control important to safety - Classification of instrumentation and control functions	EN 61226	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC/TR 61000-1-6	-	Electromagnetic compatibility (EMC) - Part - 1-6: General - Guide to the assessment of measurement uncertainty		-
IEC/TR 61000-2-5	-	Electromagnetic compatibility (EMC) - Part - 2-5: Environment ¿ Description and classification of electromagnetic environments		-
IEC/IEEE 60780- 323	-	Nuclear facilities - Electrical equipment important to safety - Qualification	EN 60780-323	-

**iTeh Standards**  
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[SIST EN IEC 62003:2020](https://standards.iteh.ai/catalog/standards/sist/92964be4-0050-48d7-8c84-74459ae6e30a/sist-en-iec-62003-2020)

<https://standards.iteh.ai/catalog/standards/sist/92964be4-0050-48d7-8c84-74459ae6e30a/sist-en-iec-62003-2020>





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# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Nuclear power plants – Instrumentation, control and electrical power systems –  
Requirements for electromagnetic compatibility testing**

**Centrales nucléaires de puissance – Systèmes d'instrumentation, de contrôle-  
commande et d'alimentation électrique – Exigences relatives aux essais de  
compatibilité électromagnétique**

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<https://standards.iteh.ai/catalog/standards/sist/92964be4-0050-48d7-8c84-74459ae6e30a/sist-en-iec-62003-2020>

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## CONTENTS

FOREWORD .....	4
INTRODUCTION .....	6
1 Scope .....	8
2 Normative references .....	8
3 Terms and definitions .....	10
4 Abbreviated terms .....	11
5 EMC test requirements .....	12
6 Electromagnetic environment .....	13
7 Immunity testing .....	15
7.1 General .....	15
7.2 Applicability .....	15
7.3 Measurement uncertainty .....	15
7.4 Test requirements .....	16
7.5 Immunity test considerations for wireless technology .....	19
8 Emissions testing .....	20
9 Test considerations .....	21
10 Test report documentation .....	22
Annex A (normative) Functional quality criteria of nuclear I&C and electrical EUT for immunity .....	23
Annex B (informative) Quality characteristics defining the classification of electromagnetic environment severity in the locations where nuclear I&C and electrical power equipment is to be installed .....	24
Annex C (informative) Explanation for the degrees of severity of tests for EMC immunity .....	27
C.1 General .....	27
C.2 Immunity to electrostatic discharges according to IEC 61000-4-2 .....	27
C.3 Immunity to radio-frequency electromagnetic field according to IEC 61000-4-3 (or IEC 61000-4-20) .....	27
C.4 Immunity to electrical fast transient/burst according to IEC 61000-4-4 .....	28
C.5 Immunity to surge disturbances of large energy according to IEC 61000-4-5 .....	28
C.6 Immunity to conducted disturbances induced by radiofrequency fields according to IEC 61000-4-6 .....	28
C.7 Immunity to power frequency magnetic field according to IEC 61000-4-8 .....	28
C.8 Immunity to pulse magnetic field according to IEC 61000-4-9 .....	29
C.9 Immunity to a damped oscillatory magnetic field according to IEC 61000-4-10 .....	29
C.10 Immunity to voltage dips and short voltage interruptions according to IEC 61000-4-11, IEC 61000-4-29, and IEC 61000-4-34 .....	29
C.11 Immunity to a ring wave surge according to IEC 61000-4-12 .....	29
C.12 Immunity to a distortion of harmonics and interharmonics including mains signalling at AC power port according to IEC 61000-4-13 .....	30
C.13 Immunity to fluctuations of power supply voltage according to IEC 61000-4-14 .....	30
C.14 Immunity to conducted common mode disturbances in the frequency range of 0 Hz to 150 kHz according to IEC 61000-4-16 .....	30
C.15 Immunity to ripple on DC input power ports according to IEC 61000-4-17 .....	30
C.16 Immunity to oscillatory damped disturbances according to IEC 61000-4-18 .....	31

C.17 Immunity to variation of power frequency according to IEC 61000-4-28.....	31
Annex D (informative) Guidance for tests and evaluation of the electromagnetic environment in a nuclear power plant.....	32
Annex E (informative) Guidance for tests and evaluation of conformance with the requirements for emissions and immunity of operating nuclear I&C and electrical equipment.....	33
Annex F (informative) Example form of test plan for nuclear I&C and electrical equipment tests for emissions and immunity .....	34
Annex G (informative) Example form of test report for nuclear I&C and electrical equipment tests for emissions and immunity .....	35
Annex H (informative) EMC testing of power electronics and adjustable speed drives.....	36
Bibliography.....	38
Figure 1 – Examples of ports .....	11
Figure 2 – Example of the situation of a power station .....	14
Table 1 – Description of applicable EMC immunity and emissions tests for nuclear I&C and electrical equipment important to safety .....	13
Table 2 – Immunity specifications – Enclosure port.....	16
Table 3 – Immunity specifications – Signal and control ports.....	17
Table 4 – Immunity specifications – Low voltage AC input and output power ports.....	18
Table 5 – Immunity specifications – Low voltage DC input and output power ports.....	19
Table 6 – Limits for radiated emissions from nuclear I&C and electrical equipment.....	20
Table 7 – Limits for conducted emissions from nuclear I&C and electrical equipment.....	21
Table A.1 – Functional quality criteria of nuclear I&C and electrical EUT for immunity .....	23
Table B.1 – Quality characteristics defining the classification of electromagnetic environment severity in the locations where nuclear I&C and electrical equipment is to be installed .....	24
Table H.1 – IEC 61800-3 conducted emissions limits for category C3 power distribution system in the second (typical industrial) environment .....	36
Table H.2 – IEC 61800-3 radiated emissions limits for category C3 power distribution system in the second (typical industrial) environment.....	37

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# NUCLEAR POWER PLANTS – INSTRUMENTATION, CONTROL AND ELECTRICAL POWER SYSTEMS – REQUIREMENTS FOR ELECTROMAGNETIC COMPATIBILITY TESTING

## FOREWORD

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International Standard IEC 62003 has been prepared by subcommittee 45A: Instrumentation, control and electrical power systems of nuclear facilities, of IEC technical committee 45: Nuclear instrumentation.

This second edition cancels and replaces the first edition published in 2009. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) title modified.
- b) expand the scope to encompass Electromagnetic Magnetic Compatibility (EMC) considerations for electrical equipment.
- c) provide guidance for addressing the use of wireless technology.
- d) enhance the description of the electromagnetic environment to provide clarification when selecting custom test levels or for test exemptions.