



SLOVENSKI STANDARD
SIST EN 61083-1:1998

01-januar-1998

**Digital recorders for measurements in high- voltage impulse tests - Part 1:
Requirements for digital recorders (IEC 61083-1:1991, modified)**

Digital recorders for measurements in high- voltage impulse tests - Part 1: Requirements for digital recorders (IEC 61083-1:1991, modified)

Digitalrekorder für Stoßspannungs- und Stoßstromprüfungen -- Teil 1: Anforderungen an digitalrekorder

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Enregistreurs numériques pour les mesures pendant les essais de choc à haute tension -- Partie 1: Prescriptions pour des enregistreurs numériques

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Ta slovenski standard je istoveten z: EN 61083-1:1993

ICS:

17.220.20 Measurement of electrical and magnetic quantities

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EUROPEAN STANDARD

EN 61083-1

NORME EUROPEENNE

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ENGLISH VERSION

Digital recorders for measurements in high-voltage impulse tests

Part 1: Requirements for digital recorders
(IEC 1083-1:1991, modified)

REPUBLIKA SLOVENIJA
 MINISTRSTVO ZA ZNANOST IN TEHNOLOGIJO
 Urad RS za standardizacijo in meroslovje
 LJUBLJANA

Enregistreurs numériques pour
 les mesures pendant les essais
 de choc à haute tension
 Partie 1: Prescriptions pour des
 enregistreurs numériques
 (CEI 1083-1:1991, modifiée)

Digitalrekorder für
 Stoßspannungs- und
 Stoßstromprüfungen
 Teil 1: Anforderungen an
 Digitalrekorder
 (IEC 1083-1:1991, modifiziert)

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 PREVZET PO METODI RAZGLASITVE

-01- 1998

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This European Standard was approved by CENELEC on 1993-03-09. 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.

<https://standards.iteh.ai/catalog/standards/sist/a979273a-3184-4593-98b5-1083-1:1998>

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, 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

FOREWORD

The CENELEC questionnaire procedure, performed for finding out whether or not the International Standard IEC 1083-1:1991 could be accepted without textual changes, has shown that some common modifications were necessary for the acceptance as European Standard.

The reference document, together with the common modifications prepared by the CENELEC Reporting Secretariat SR 42, was submitted to the CENELEC members for formal vote.

The text of the draft was approved by CENELEC as EN 61083-1 on 9 March 1993.

NOTE: Switzerland has no obligation to implement this European Standard.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1994-03-01
- latest date of withdrawal of conflicting national standards (dow) 1994-03-01

For products which have complied with the relevant national standard before 1994-03-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1999-03-01.

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given only for information. In this standard, annexes A, B and C are informative and annex ZA is normative.

ENDORSEMENT NOTICE

The text of the International Standard IEC 1083-1:1991 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS**Section 2 Requirements and tests****2.2 Performance tests****2.2.6 Replace the title and text of this clause by:****The mesure of dynamic conversion coefficient**

The dynamic conversion coefficient should be mesured either by the method according to what has been stated at 2.2.6.1 or by the other one exposed at 2.2.6.2.

The calibration voltage level (the impulse peak and the step values) must be comparable with the voltage level to be mesured.

2.3 Performance checks**2.3.1 Replace the first sentence of this subclause by:**

Performance checks shall be performed once a month at the beginning and end of a period of use, i.e. once after the warm-up time and once before the digital recorder is switched off.

ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD
WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC Publication	Date	Title	EN/HD	Date
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60-1	1989	High-voltage test techniques Part 1: General definitions and test requirements	HD 588.1 S1	1991
60-3	1976	Part 3: Measuring devices	-	-
60-4	1977	Part 4: Application guide for measuring devices	-	-

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC
1083-1**

Première édition
First edition
1991-08

**Enregistreurs numériques pour les mesures
pendant les essais de choc à haute tension**

Partie 1:

Prescriptions pour des enregistreurs numériques

(standards.iteh.ai)

**Digital recorders for measurements in
high-voltage impulse tests**

Part 1:

Requirements for digital recorders

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International Electrotechnical Commission
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

DIGITAL RECORDERS FOR MEASUREMENTS IN
HIGH-VOLTAGE IMPULSE TESTS

Part 1: Requirements for digital recorders

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects examined.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

This standard has been prepared by IEC Technical Committee No. 42: High-voltage testing techniques.

This standard forms part 1 of a series of two parts and is the first edition of IEC 1083-1. The parts are:

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Part 1: Requirements for digital recorders

Part 2: Digital signal processing (under consideration)

SIST EN 61083-1:1998

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

Six Months' Rule	Report on Voting
42(CO)43	42(CO)46

Full information on the voting for the approval of this part can be found in the Voting Report indicated in the above table.

Annexes A,B and C are for information only.

DIGITAL RECORDERS FOR MEASUREMENTS IN HIGH-VOLTAGE IMPULSE TESTS

Part 1: Requirements for digital recorders

Section 1: General

1.1 Scope

This part of IEC 1083 is applicable to digital recorders and digital oscilloscopes used for measurements during tests with high impulse voltages and high impulse currents. It specifies the measuring characteristics and calibrations required to meet the measuring accuracies and procedures specified in IEC 60-1.

This part:

- defines the terms specifically related to the digital recorders used for measurements during high voltage and high current impulse tests;
- specifies the necessary requirements for such digital recorders to ensure their compliance with the requirements for high voltage and for high current impulse tests; and
- establishes the tests and procedures which are necessary to fulfil these requirements.

[SIST EN 61083-1:1998](https://standards.iteh.ai/catalog/standards/sist/a979273a-3184-4593-98b5-c0955846bee9/sist-en-61083-1-1998)

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1.2 Normative references [c0955846bee9/sist-en-61083-1-1998](https://standards.iteh.ai/catalog/standards/sist/a979273a-3184-4593-98b5-c0955846bee9/sist-en-61083-1-1998)

The following standards contain provisions which, through reference in this text, constitute provisions of this part of IEC 1083. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of IEC 1083 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60-1: 1989, *High-voltage test techniques — Part 1: General definitions and test requirements.*

IEC 60-3: 1976, *High-voltage test techniques — Part 3: Measuring devices.*

IEC 60-4: 1977, *High-voltage test techniques — Part 4: Application guide for measuring devices.*

1.3 Conditions of use

1.3.1 Range of operating conditions

The range of operating conditions given in table 1 are those under which the instrument should operate satisfactorily and meet the accuracy requirements specified in 2.1.1 when it has been calibrated.

Any exceptions to the values given in table 1 shall be explicitly and clearly stated in the record of performance with an indication that they are exceptions.

Table 1 — Normal operating conditions

Operating conditions	Range
Environment	
Ambient temperature	+5 °C to +40 °C
Ambient relative humidity	10 % to 90 %
Supply	
Mains supply voltage	Rated voltage ± 10 % (r.m.s.) ± 12 % (a.c. peak)
Mains supply frequency	Rated frequency ± 5 %

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If the instrument is operated under conditions different from those specified in table 1, special precautions may be necessary.

The mains supply may have transient overvoltages superimposed on it; suitable precautions should be taken to prevent them from affecting the operation of the instrument.

1.3.2 Reference conditions

The reference conditions are those for which the accuracy of the instrument shall be specified and under which investigation of the accuracy shall be made. The reference conditions are given in table 2. The reference temperature shall be specified.