SLOVENSKI STANDARD
SIST EN 61180-2:1998

01-januar-1998

High-voltage test techniques for low-voltage equipment - Part 2: Test equipment (IEC 61180-2:1994)

High-voltage test techniques for low-voltage equipment -- Part 2: Test equipment

Hochspannungs-Prüftechnik für Niederspannungsgeräte -- Teil 2: Prüfgeräte

Techniques des essais à haute tension pour matériels à basse tension -- Partie 2: Matériel d'essai

Ta slovenski standard je istoveten z: EN 61180-2:1994

ICS:

19.080	Električno in elektronsko preskušanje	Electrical and electronic testing

SIST EN 61180-2:1998 **en**

EUROPEAN STANDARD

NORME EUROPEENNE

EUROPÄISCHE NORM

EN 61180-2

September 1994

ICS 29.020

Descriptors: High-voltage tests, low-voltage equipment, test equipment

ENGLISH VERSION

High-voltage test techniques for low-voltage equipment
Part 2: Test equipment
(IEC 1180-2:1994)

Techniques des essais à haute tension pour matériel à basse tension
Partie 2: Matériel d'essai
(CEI 1180-2:1994)

Hochspannungs-Prüftechnik für Niederspannungsgeräte
Teil 2: Prüfgeräte
(IEC 1180-2:1994)

This European Standard was approved by CENELEC on 1994-07-05. 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, 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

Ref. No. EN 61180-2:1994 E

FOREWORD

The text of document 42(CO)53, as prepared by IEC Technical Committee 42: High-voltage testing techniques, was submitted to the IEC-CENELEC parallel vote in December 1993.

The reference document was approved by CENELEC as EN 61180-2 on 5 July 1994.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1995-07-01

- latest date of withdrawal of conflicting national standards (dow) 1995-07-01

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

ENDORSEMENT NOTICE

The text of the International Standard IEC 1180-2:1994 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

NOTE : 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
68-1	1988	Environmental testing - Part 1: General and guidance	EN 60068-1*	1994
790	1984	Oscilloscopes and peak voltmeters for impulse tests	HD 479 S1	1986
1083-1, mod	1991	Digital recorders for measurements in high-voltage impulse tests Part 1: Requirements for digital recorders	EN 61083-1	1993
1180-1	1992	High-voltage test techniques for low-voltage equipment Part 1: Definitions, test and procedure requirements	EN 61180-1	1994

NOTE - The requirements of HD 479 S1 and EN 61083-1 may be reduced because the uncertainty limits of this part of 1180 are less stringent than those in HD 588.1 S1, for example, +/- 5% for peak value (+/- 3% in HD 588.1 S1)

---

* EN 60068-1 includes the corrigendum October 1988 and A1:1992 to IEC 68-1

NORME INTERNATIONALE
INTERNATIONAL STANDARD

CEI
IEC
1180-2

Première édition
First edition
1994-06

Techniques des essais à haute tension pour matériel à basse tension –

Partie 2:
Matériel d'essai

High-voltage test techniques for low-voltage equipment –

Part 2:
Test equipment

Bureau Central de la Commission Electrotechnique Internationale 3, rue de Varembé Genève, Suisse

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE K

Pour prix, voir catalogue en vigueur
For price, see current catalogue

CONTENTS

Page

FOREWORD 5

Clause

1 Scope 7

2 Normative references 7

3 Definitions 9

4 General conditions for verification of test equipment 9

4.1 Atmospheric conditions 9
4.2 Connections and arrangement 9
4.3 Influence of the load 11
4.4 Comparison procedure 11
4.5 Frequency of verifications 11

5 Verification of characteristics of direct voltage generators 11

5.1 Ripple factor 11
5.2 Permitted measuring error 11
5.3 Voltage regulation 11

6 Verification of characteristics of alternating voltage generators 11

6.1 Voltage wave-form 11
6.2 Permitted measuring error 13
6.3 Minimum test voltage 13

7 Verification of characteristics of impulse voltage 13

7.1 Voltage wave-form 13
7.2 Permitted measuring error 13
7.3 Conventional output impedance 13

8 Verification of characteristics of impulse current generators 15

8.1 Current wave-form 15
8.2 Permitted measuring error 15

9 Verification of characteristics of hybrid impulse voltage generators 15

9.1 Wave-form and permitted measuring error 15
9.2 Virtual impedance 15

10 Requirements for reference measuring systems 17

10.1 Direct voltage 17
10.2 Alternating voltage 17
10.3 Lightning impulse voltage 17
10.4 Impulse current 17
10.5 Comparative measurement 17

Annex A – Bibliography 19

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HIGH-VOLTAGE TEST TECHNIQUES FOR LOW-VOLTAGE EQUIPMENT –

Part 2: Test equipment

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) 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 dealt with.

3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.

4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

International Standard IEC 1180-2 has been prepared by IEC technical committee 42: High-voltage testing techniques.

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

DIS	Report on voting
42(CO)53	42(CO)56

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

Annex A is for information only.