BS EN 60060-1:2010

BSI Standards Publication

High-voltage test techniques

Part 1: General definitions and test requirements

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National foreword

This British Standard is the UK implementation of EN 60060-1:2010. It is identical to IEC 60060-1:2010. It supersedes BS 923-1:1990, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PEL/42, Testing techniques for high voltages and currents.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

ISBN 978 0 580 68953 6

ICS 17.220.20; 19.080

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 28 February 2011.

Amendments issued since publication

Amd. No.	Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60060-1

December 2010

ICS 17.220.20

Supersedes HD 588.1 S1:1991

English version

High-voltage test techniques - Part 1: General definitions and test requirements

(IEC 60060-1:2010)

Technique des essais à haute tension - Partie 1: Définitions et exigences générales
(CEI 60060-1:2010)

Hochspannungs-Prüftechnik - Teil 1: Allgemeine Begriffe und Prüfbedingungen
(IEC 60060-1:2010)

This European Standard was approved by CENELEC on 2010-12-01. 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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Ref. No. EN 60060-1:2010 E

Foreword

The text of document 42/277/FDIS, future edition 3 of IEC 60060-1, prepared by IEC/TC 42, High-voltage testing techniques, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60060-1 on 2010-12-01.

This European Standard supersedes HD 588.1 S1:1991.

This EN 60060-1:2010 includes the following technical changes with respect to HD 588.1 S1:1991:

– The general layout and text was updated and improved to make the standard easier to use.

– Artificial pollution test procedures were removed as they are now described in EN 60507.

– Measurement of impulse current has been transferred to a new standard on current measurement (EN 62475).

– The atmospheric correction factors are now presented as formulas.

– A new method has been introduced for the calculation of the time parameters of lightning impulse waveforms. This improves the measurement of the time parameters of lightning impulses with oscillations or overshoot.

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)	2011-09-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2013-12-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60060-1:2010 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 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.

Publication	Year	Title	EN/HD	Year
IEC 60060-2	-	High-voltage test techniques - Part 2: Measuring systems	EN 60060-2	-
IEC 60270	-	High-voltage test techniques - Partial discharge measurements	EN 60270	-
IEC 60507	1991	Artificial pollution tests on high-voltage insulators to be used on a.c. systems	EN 60507	1993
IEC 61083-1	-	Instruments and software used for measurement in high-voltage impulse tests - Part 1: Requirements for instruments	EN 61083-1	-
IEC 61083-2	-	Digital recorders for measurements in high-voltage impulse tests - Part 2: Evaluation of software used for the determination of the parameters of impulse waveforms	EN 61083-2	-
IEC 62475	-	High-current test techniques - Definitions and requirements for test currents and measuring systems	EN 62475	-

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HIGH-VOLTAGE TEST TECHNIQUES –

Part 1: General definitions and test requirements

1 Scope

This part of IEC 60060 is applicable to:

– dielectric tests with direct voltage;
– dielectric tests with alternating voltage;
– dielectric tests with impulse voltage;
– dielectric tests with combinations of the above.

This part is applicable to tests on equipment having its highest voltage for equipment U_m above 1 kV.

NOTE 1 Alternative test procedures may be required to obtain reproducible and significant results. The choice of a suitable test procedure should be made by the relevant Technical Committee.

NOTE 2 For voltages U_{m} above 800 kV meeting some specified procedures, tolerances and uncertainties may not be achievable.

2 Normative references

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.

IEC 60060-2, *High-voltage test techniques – Part 2: Measuring systems*

IEC 60270, *High-voltage test techniques – Partial discharge measurements*

IEC 60507:1991, *Artificial pollution tests on high-voltage insulators to be used on a.c. systems*

IEC 61083-1, *Instruments and software used for measurement in high-voltage impulse tests – Part 1: Requirements for instruments*

IEC 61083-2, *Digital recorders for measurements in high-voltage impulse tests – Part 2: Evaluation of software used for the determination of the parameters of impulse waveforms*

IEC 62475, *High-current test techniques: Definitions and requirements for test currents and measuring systems*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.