

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 It supersedes BS 923-1:1990, which is withdrawn.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.

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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
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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)

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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.

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CENELEC

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

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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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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	-

CONTENTS

1	Scope	7
2	Normative references	7
3	Terms and definitions	7
3.1	Definitions related to characteristics of discharges	8
3.2	Definitions relating to characteristics of the test voltage	8
3.3	Definitions relating to tolerance and uncertainty	9
3.4	Definitions relating to statistical characteristics of disruptive-discharge voltage values	9
3.5	Definitions relating to classification of insulation in test objects	10
4	General requirements	11
4.1	General requirements for test procedures	11
4.2	Arrangement of the test object in dry tests	11
4.3	Atmospheric corrections in dry tests	12
4.3.1	Standard reference atmosphere	12
4.3.2	Atmospheric correction factors for air gaps	12
4.3.3	Application of correction factors	13
4.3.4	Correction factor components	13
4.3.5	Measurement of atmospheric parameters	16
4.3.6	Conflicting requirements for testing internal and external insulation	17
4.4	Wet tests	18
4.4.1	Wet test procedure	18
4.4.2	Atmospheric corrections for wet tests	19
4.5	Artificial pollution tests	19
5	Tests with direct voltage	19
5.1	Definitions for direct voltage tests	19
5.2	Test voltage	20
5.2.1	Requirements for the test voltage	20
5.2.2	Generation of the test voltage	20
5.2.3	Measurement of the test voltage	20
5.2.4	Measurement of the test current	21
5.3	Test procedures	21
5.3.1	Withstand voltage tests	21
5.3.2	Disruptive-discharge voltage tests	22
5.3.3	Assured disruptive-discharge voltage tests	22
6	Tests with alternating voltage	22
6.1	Definitions for alternating voltage tests	22
6.2	Test Voltage	22
6.2.1	Requirements for the test voltage	22
6.2.2	Generation of the test voltage	23
6.2.3	Measurement of the test voltage	24
6.2.4	Measurement of the test current	25
6.3	Test procedures	25
6.3.1	Withstand voltage tests	25
6.3.2	Disruptive-discharge voltage tests	25
6.3.3	Assured disruptive-discharge voltage tests	25

7	Tests with lightning-impulse voltage	26
7.1	Definitions for lightning-impulse voltage tests	26
7.2	Test Voltage	33
7.2.1	Standard lightning-impulse voltage	33
7.2.2	Tolerances	34
7.2.3	Standard chopped lightning-impulse voltage	34
7.2.4	Special lightning-impulse voltages	34
7.2.5	Generation of the test voltage	34
7.2.6	Measurement of the test voltage and determination of impulse shape	34
7.2.7	Measurement of current during tests with impulse voltages	35
7.3	Test Procedures	35
7.3.1	Withstand voltage tests	35
7.3.2	Procedures for assured disruptive-discharge voltage tests	36
8	Tests with switching-impulse voltage	36
8.1	Definitions for switching-impulse voltage tests	36
8.2	Test voltage	38
8.2.1	Standard switching-impulse voltage	38
8.2.2	Tolerances	38
8.2.3	Time-to-peak evaluation	38
8.2.4	Special switching-impulse voltages	38
8.2.5	Generation of the test voltage	38
8.2.6	Measurement of test voltage and determination of impulse shape	39
8.2.7	Measurement of current during tests with impulse voltages	39
8.3	Test procedures	39
9	Tests with combined and composite voltages	39
9.1	Definitions for combined- and composite-voltage tests	39
9.2.4	Tolerances	42
9.2.5	Generation	42
9.2.6	Measurement	42
9.3	Composite test voltages	43
9.3.1	Parameters	43
9.3.2	Tolerances	43
9.3.3	Generation	43
9.3.4	Measurement	43
9.4	Test procedures	43
Annex A	(informative) Statistical treatment of test results	45
Annex B	(normative) Procedures for calculation of parameters of standard lightning-impulse voltages with superimposed overshoot or oscillations	54
Annex C	(informative) Guidance for implementing software for evaluation of lightning-impulse voltage parameters	59
Annex D	(informative) Background to the introduction of the test voltage factor for evaluation of impulses with overshoot	62
Annex E	(informative) The iterative calculation method in the converse procedure for the determination of atmospheric correction factor	68
Bibliography	73

Figure 1 – Recommended minimum clearance D of extraneous live or earthed objects to the energized electrode of a test object, during an a.c. or positive switching impulse test at the maximum voltage U applied during test 12

Figure 2 – k as a function of the ratio of the absolute humidity h to the relative air density ρ (see 4.3.4.2 for limits of applicability)	14
Figure 3 – Values of exponents m and w	16
Figure 4 – Absolute humidity of air as a function of dry- and wet-bulb thermometer readings	17
Figure 5 – Full lightning-impulse voltage	26
Figure 6 – Test voltage function	28
Figure 7 – Full impulse voltage time parameters	29
Figure 8 – Voltage time interval	30
Figure 9 – Voltage integral	30
Figure 10 – Lightning-impulse voltage chopped on the front	31
Figure 11 – Lightning-impulse voltage chopped on the tail	32
Figure 12 – Linearly rising front chopped impulse	32
Figure 13 – Voltage/time curve for impulses of constant prospective shape	33
Figure 14 – Switching-impulse voltage	37
Figure 15 – Circuit for a combined voltage test	40
Figure 16 – Schematic example for combined and composite voltage	41
Figure 17 – Circuit for a composite voltage test	42
Figure 18 – Definition of time delay Δt	43
Figure A.1 – Example of a multiple-level (Class 1) test	48
Figure A.2 – Examples of decreasing and increasing up-and-down (Class 2) tests for determination of 10 % and 90 % disruptive-discharge probabilities respectively	49
Figure A.3 – Examples of progressive stress (Class 3) tests	50
Figure B.1 – Recorded and base curve showing overshoot and residual curve	55
Figure B.2 – Test voltage curve (addition of base curve and filtered residual curve)	55
Figure B.3 – Recorded and test voltage curves	56
Figure D.1 – “Effective” test voltage function in IEC 60060-1:1989	63
Figure D.2 – Representative experimental points from European experiments and test voltage function	65
Figure E.1 – Atmospheric pressure as a function of altitude	69
Table 1 – Values of exponents, m for air density correction and w for humidity correction, as a function of the parameter g	15
Table 2 – Precipitation conditions for standard procedure	19
Table A.1 – Discharge probabilities in up-and-down testing	52
Table E.1 – Altitudes and air pressure of some locations	69
Table E.2 – Initial K_t and its sensitivity coefficients with respect to U_{50} for the example of the standard phase-to-earth a.c. test voltage of 395 kV	70
Table E.3 – Initial and converged K_t values for the example of the standard phase-to-earth a.c. test voltage of 395 kV	72

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.