

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Low-voltage fuses –
Part 1: General requirements**

**Fusibles basse tension –
Partie 1: Exigences générales**





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IEC Secretariat
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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CONTENTS

FOREWORD.....	7
1 Scope.....	9
2 Normative references	9
3 Terms and definitions	10
3.1 Fuses and their component parts	10
3.2 General terms	12
3.3 Characteristic quantities	14
4 Conditions for operation in service.....	17
4.1 General.....	17
4.2 Ambient air temperature (T_a)	18
4.3 Altitude	18
4.4 Atmospheric conditions	18
4.5 Voltage	18
4.6 Current	18
4.7 Frequency, power factor and time constant.....	18
4.7.1 Frequency	18
4.7.2 Power factor	19
4.7.3 Time constant (τ).....	19
4.8 Conditions of installation.....	19
4.9 Utilization class.....	19
4.10 Selectivity of fuse-links	19
5 Classification.....	19
6 Characteristics of fuses	19
6.1 Summary of characteristics.....	19
6.1.1 General	19
6.1.2 Fuse-holders	19
6.1.3 Fuse-links.....	20
6.1.4 Complete fuses.....	20
6.2 Rated voltage	20
6.3 Rated current	21
6.3.1 Rated current of the fuse-link.....	21
6.3.2 Rated current of the fuse-holder	21
6.4 Rated frequency (see 7.1 and 7.2).....	21
6.5 Rated power dissipation of a fuse-link and rated acceptable power dissipation of a fuse-holder.....	21
6.6 Limits of time-current characteristics.....	21
6.6.1 General	21
6.6.2 Time-current characteristics, time-current zones.....	21
6.6.3 Conventional times and currents.....	22
6.6.4 Gates	22
6.7 Breaking range and breaking capacity	23
6.7.1 Breaking range and utilization category	23
6.7.2 Rated breaking capacity	24
6.8 Cut-off current and I^2t characteristics	24
6.8.1 General	24
6.8.2 Cut-off current characteristics.....	24

6.8.3	I^2t characteristics	24
7	Markings.....	24
7.1	General.....	24
7.2	Markings of fuse-holders.....	25
7.3	Markings of fuse-links	25
8	Standard conditions for construction.....	25
8.1	Mechanical design	25
8.1.1	Replacement of fuse-links.....	25
8.1.2	Connections, including terminals	25
8.1.3	Fuse-contacts.....	26
8.1.4	Construction of a gauge-piece	26
8.1.5	Mechanical strength of the fuse-link.....	26
8.2	Insulating properties and suitability for isolation	26
8.3	Temperature rise, power dissipation of the fuse-link and acceptable power dissipation of a fuse-holder	27
8.4	Operation.....	27
8.5	Breaking capacity	28
8.6	Cut-off current characteristic.....	28
8.7	I^2t characteristics	29
8.8	Overcurrent selectivity of fuse-links	29
8.9	Protection against electric shock.....	30
8.9.1	General	30
8.9.2	Clearances and creepage distances	30
8.9.3	Leakage currents of fuses suitable for isolation	31
8.9.4	Additional constructional requirements for fuse holders for linked fuse-carriers, suitable for isolation.....	31
8.10	Resistance to heat.....	32
8.11	Mechanical strength.....	32
8.12	Resistance to corrosion	32
8.12.1	General	32
8.12.2	Resistance to rusting	32
8.12.3	Resistance to season cracking	32
8.13	Resistance to abnormal heat and fire.....	32
8.14	Electromagnetic compatibility.....	32
9	Tests.....	32
9.1	Overview.....	32
9.1.1	General	32
9.1.2	Kind of tests	33
9.1.3	Ambient air temperature (T_a).....	33
9.1.4	Condition of the fuse.....	33
9.1.5	Arrangement of the fuse and dimensions	33
9.1.6	Testing of fuse-links	33
9.1.7	Testing of fuse-holders	37
9.2	Verification of the insulating properties and of the suitability for isolation	38
9.2.1	Arrangement of the fuse-holder	38
9.2.2	Verification of the insulating properties	38
9.2.3	Verification of the suitability for isolation.....	39
9.2.4	Acceptability of test results.....	40

9.3	Verification of temperature rise and power dissipation	40
9.3.1	Arrangement of the fuse	40
9.3.2	Measurement of the temperature rise	41
9.3.3	Measurement of the power dissipation of the fuse-link	41
9.3.4	Test method	41
9.3.5	Acceptability of test results	43
9.4	Verification of operation	43
9.4.1	Arrangement of the fuse	43
9.4.2	Ambient air temperature	43
9.4.3	Test method and acceptability of test results	43
9.5	Verification of the breaking capacity	47
9.5.1	Arrangement of the fuse	47
9.5.2	Characteristics of the test circuit	47
9.5.3	Measuring instruments	48
9.5.4	Calibration of test circuit	48
9.5.5	Test method	50
9.5.6	Ambient air temperature	52
9.5.7	Interpretation of oscillograms	52
9.5.8	Acceptability of test results	52
9.6	Verification of the cut-off current characteristics	53
9.6.1	Test method	53
9.6.2	Acceptability of test results	53
9.7	Verification of I^2t characteristics and overcurrent selectivity	53
9.7.1	Test method	53
9.7.2	Acceptability of test results	53
9.7.3	Verification of compliance for fuse links at 0,01 s	53
9.7.4	Verification of overcurrent selectivity	54
9.8	Verification of the degree of protection of enclosures	54
9.9	Verification of resistance to heat	54
9.10	Verification of non-deterioration of contacts	54
9.10.1	General	54
9.10.2	Arrangement of the fuse	54
9.10.3	Test method	54
9.10.4	Acceptability of test results	54
9.11	Mechanical and miscellaneous tests	55
9.11.1	Mechanical strength	55
9.11.2	Miscellaneous tests	55
9.12	Test of durability of markings	58
Annex A (informative)	Measurement of short-circuit power factor	68
Annex B (informative)	Calculation of pre-arcing I^2t values for "gG", "gM" and "gU" fuse-links and calculation of operating I^2t values at reduced voltage	71
B.1	Evaluation of the pre-arcing I^2t value at 0,01 s	71
B.2	Calculation of the value of pre-arcing I^2t under the conditions of test no. 2	71
B.3	Calculation of the value of operating I^2t at reduced voltage	71
Annex C (informative)	Calculation of cut-off current-time characteristic	72
C.1	Overview	72
C.2	Preliminary note	72
C.3	Definition	72

C.4	Characteristic.....	72
C.5	Test condition	73
C.6	Calculation from the measured values	73
Annex D (informative) Effect of change of ambient temperature and surroundings on the performance of fuse-links.....		76
D.1	Effect of increase of ambient temperature.....	76
D.1.1	On current rating	76
D.1.2	On temperature rise.....	76
D.1.3	On conventional fusing and non-fusing current (I_f and I_{nf}).....	76
D.1.4	For motor starting conditions	76
D.2	Effect of decrease of ambient air temperature.....	76
D.3	Effect of installation conditions.....	76
Annex E (normative) Particular requirements for fuse-bases with screwless-type terminals for external copper conductors.....		77
E.1	General.....	77
E.3	Terms and definitions.....	77
E.7	Marking.....	78
E.8	Standard conditions for construction	78
E.8.1	Fixed connections including terminals.....	78
E.8.2	Dimensions of connectable conductors	78
E.8.3	Connectable cross-sectional areas	79
E.8.4	Insertion and disconnecting of conductor	79
E.8.5	Design and construction of terminals.....	79
E.8.6	Resistance to ageing	80
E.9	Tests	80
E.9.1	Test of reliability of terminals	80
E.9.2	Tests of reliability of terminals for external conductors: mechanical strength	80
E.9.3	Cycling test.....	81
Bibliography.....		84
Figure 1 – Diagram illustrating the means of verification of the time-current characteristic, using the results of the tests at the "gate" currents (example)		59
Figure 2 – Overload curve and time-current characteristic for "a" fuse-links		60
Figure 3 – Time-current zone for aM fuses.....		61
Figure 4 – General presentation of the cut-off characteristics for a series of AC fuse-links.....		62
Figure 5 – Typical diagram of the circuit used for breaking capacity test (see 9.5)		63
Figure 6 – Interpretation of oscillograms taken during the AC breaking-capacity tests (see 9.5.7)		64
Figure 7 – Interpretation of oscillograms taken during the DC breaking-capacity tests (see 9.5.7)		65
Figure 8 – Glow-wire and position of the thermocouple		66
Figure 9 – Test apparatus (example)		67
Figure A.1 – Determination of circuit-impedance for calculation of power factor in accordance with method I		70
Figure C.1 – Cut-off current characteristic as a function of actual pre-arcing time		75
Figure E.1 – Connecting samples		82

Figure E.2 – Examples of terminals.....	83
Table 1 – Standard values of AC rated voltages for fuses	20
Table 2 – Preferred values of DC rated voltages for fuses	20
Table 3 – Conventional time and current for "gG", and "gM" fuse-links.....	22
Table 4 – Gates for specified pre-arcing times of "gG" and "gM" fuse-links ^a	23
Table 5 – Gates for "aM" fuse-links (all rated currents).....	23
Table 6 – Temperature rise limits $\Delta T = (T - T_a)$ for terminals	27
Table 7 – Maximum arc voltage	28
Table 8 – Pre-arcing I^2t values at 0,01 s for "gG" and "gM" fuse-links	29
Table 9 – Rated impulse withstand voltage	30
Table 10 – Minimum clearances in air	30
Table 11 – Minimum creepage distances	31
Table 12 – Survey of complete tests on fuse-links and number of fuse-links to be tested	35
Table 13 – Survey of tests on fuse-links of smallest rated current of a homogeneous series and number of fuse-links to be tested	36
Table 14 – Survey of tests on fuse-links of rated currents between the largest and the smallest rated current of a homogeneous series and number of fuse-links to be tested.....	37
Table 15 – Survey of complete tests on fuse-holders and number of fuse-holders to be tested	37
Table 16 – Test voltage	39
Table 17 – Test voltage across the poles for the verification of the suitability for isolation.....	40
Table 18 – Cross-sectional area of copper conductors for tests corresponding to Subclauses 9.3 and 9.4.....	42
Table 19 – Cross-section areas of the copper conductors for the test of "aM" fuses	45
Table 20 – Table for test in Subclause 9.4.3.5	46
Table 21 – Values for breaking-capacity tests on AC fuses	49
Table 22 – Values for breaking-capacity tests on DC fuses	50
Table E.1 – Connectable conductors.....	79
Table E.2 – Cross-sections of copper conductors connectable to terminals.....	79
Table E.3 – Pull forces.....	81

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE FUSES –

Part 1: General requirements

FOREWORD

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IEC 60269-1 has been prepared by subcommittee 32B: Low-voltage fuses, of IEC technical committee 32: Fuses. It is an International Standard.

This fifth edition cancels and replaces the fourth edition published in 2006, Amendment 1:2009 and Amendment 2:2014. This edition constitutes a technical revision.

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

- a) New numbering, editorial corrections and normative references updated;
- b) Term "discrimination" replaced by "selectivity" and "utilization category" by "utilization class";
- c) Term "fuses for authorized and unskilled persons" updated;
- d) Replacement of fuse-link added;

- e) Standard values for AC and DC voltages updated;
- f) Rated currents 425A, 355A, and 1 600A added;
- g) Marking: requirements and tests separated to the relevant subclauses;
- h) Requirements for temperature rise limited to terminal temperature rise only;
- i) Graphic symbol for fuse-base updated,

The text of this International Standard is based on the following documents:

Draft	Report on voting
32B/748/FDIS	32B/756/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

IEC 60269 consists of the following parts, under the general title *Low-voltage fuses*:

- Part 1: General requirements
- Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) – Examples of standardized systems of fuses A to I
- Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household or similar application) – Examples of standardized systems of fuses A to F
- Part 4: Supplementary requirements for fuse-links for the protection of semiconductor devices
- Part 5: Guidance for the application of low-voltage fuses
- Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems
- Part 7: Battery Fuses

For reasons of convenience, when a part of this publication has come from other publications, a remark to this effect has been inserted in the text.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

LOW-VOLTAGE FUSES –

Part 1: General requirements

1 Scope

This part of IEC 60269 is applicable to fuses incorporating enclosed current-limiting fuse-links with rated breaking capacities of not less than 6 kA, intended for protecting power-frequency AC circuits of nominal voltages not exceeding 1 000 V or DC circuits of nominal voltages not exceeding 1 500 V.

Subsequent parts of this standard, referred to herein, cover supplementary requirements for such fuses intended for specific conditions of use or applications.

Fuse-links intended to be included in fuse-switch combinations according to IEC 60947-3 should also comply with the following requirements.

As far as not stated in subsequent parts for fuse-links, details of performance (see 3.2.4) on DC circuits should be stated in the manufacturer's literature.

NOTE 1 Modifications of, and supplements to, this document required for certain types of fuses for particular applications – for example, certain fuses for rolling stock, or fuses for high-frequency circuits – will be covered, if necessary, by separate standards.

NOTE 2 This document does not apply to miniature fuses, these being covered by IEC 60127.

The object of this standard series is to establish the characteristics of fuses or parts of fuses (fuse-base, fuse-carrier, fuse-link) in such a way that they can be replaced by other fuses or parts of fuses having the same characteristics provided that they are interchangeable as far as their dimensions are concerned. For this purpose, this standard series refers in particular to

- the following characteristics of fuses:
 - rated values;
 - insulation;
 - temperature rise in normal service;
 - power dissipation and acceptable power dissipation;
 - time/current characteristics;
 - breaking capacity;
 - cut-off current characteristics and their I^2t characteristics.
- type test for verification of the characteristics of fuses;
- the marking of fuses.

2 Normative references

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.

IEC 60269-2, *Low-voltage fuses – Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) – Examples of standardized systems of fuses A to K*