

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

AMENDMENT 1  
AMENDEMENT 1

**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**

[IEC 60269-2:2013/AMD1:2016](https://standards.iteh.ai/catalog/standards/sist/8c3c81f-d89d-47b8-a8d8-677f0e0bb58/iec-60269-2-2013-amd1-2016)

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**Fusibles basse tension – Partie 2: Exigences supplémentaires pour les fusibles destinés à être utilisés par des personnes habilitées (fusibles pour usages essentiellement industriels) – Exemples de systèmes de fusibles normalisés A à K**





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## FOREWORD

This amendment has been prepared by subcommittee 32B: Low Voltage Fuses, of IEC technical committee 32: Fuses.

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

CDV	Report on voting
32B/641/CDV	32B/648/RVC

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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### 1.1 Scope

*Replace*

Fuses System H: Fuses with fuse-links having "gD" and "gN" characteristic (class J class L time delay and non time delay fuse types)

*by the following new text:*

Fuses System H: Fuses with fuse-links having "gD" and "gN" characteristic (class J class L and class T time delay and non time delay fuse types)

### **Fuse system A – Fuses with fuse-links with blade contacts (NH fuse system)**

#### **7.1.3 Fuse-contacts**

*Replace the first paragraph of Subclause 7.1.3 by the following new text:*

The contact surfaces of fuse-links and fuse-bases should be silver-plated; If the surface plating of the blade contacts of a fuse-link or the contacts of the fuse-base is other than silver, the test according to 8.10 shall be conducted with dummy fuse-links as described in 8.10.1. Permissible combinations of surface plating shall be defined by the manufacturer.

### 8.3.1 Arrangement of the fuse

*Replace the second paragraph of Subclause 8.3.1 by the following new text:*

In case the test arrangement contains more than one fuse, the test specimens are mounted in the conventional service position on a wooden plate or other insulating material at a distance between centre lines of 3 times  $e_2$  according to Figure 101.

### 8.7.4 Verification of overcurrent distribution

*Replace the second paragraph of Subclause 8.7.4 by the following new text:*

The samples are arranged as for the breaking capacity test according to 8.5 and Table 20, column No.2, of IEC 60269-1:2014 regarding the test circuit and tolerance of current.

*Replace the fourth and fifth paragraphs of Subclause 8.7.4 by the following new text:*

The test voltage for all fuses is  $\frac{1,1 \cdot U_n}{\sqrt{3}}$  with tolerances of  $-3\%$  /  $+2\%$ .

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*Add, at the end of Subclause 8.7.4, the following new text:*

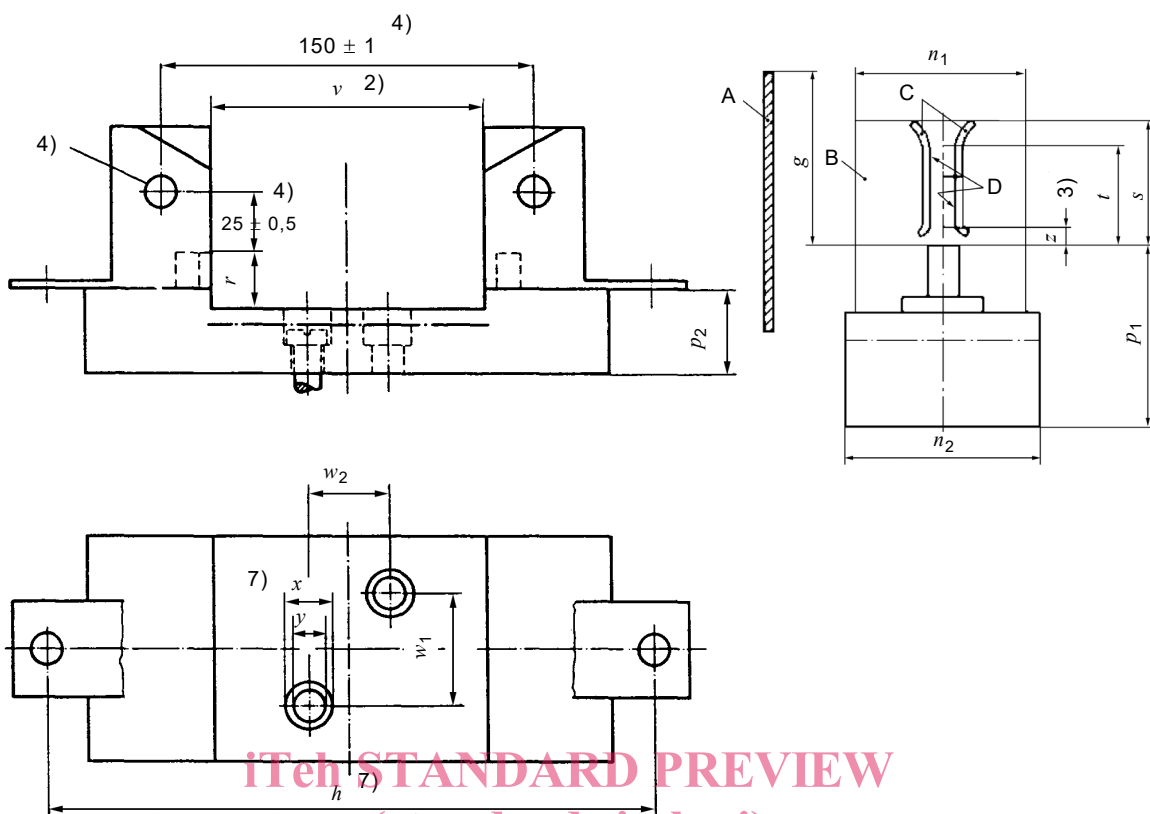
Prospective currents for minimum pre-arcing  $I^2t$  and maximum operating  $I^2t$  are  $\pm 5\%$ .

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<https://standards.iteh.ai/catalog/standards/sist/8c3c81f-d89d-47b8-a8d8-d677f0e0bb58/iec-60269-2-2013-amd1-2016>

### **Figure 102 – Fuse-bases for fuse-links with blade contacts**

*Replace the existing Figure 102 with the following new Figure 102:*



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**Key**

- A partition wall
- B see note 1)
- C contacts
- D contact surface, see note 5)

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**Fuse system F – Fuses with fuse-links having cylindrical contact caps (NF cylindrical fuse system)**

**1.1 Scope**

Replace the first sentence of the scope by the following new text:

The following additional requirements apply to fuse-links having cylindrical caps with or without striker, complying with the dimensions specified in Figures 601 and 603. Such fuses have rated currents not exceeding 125 A and rated voltages up to and including 1 000 V a.c. or 1 500 V d.c.

**Table 605 – Conventional time and current for "gG" fuse-links with rated current lower than 16 A**

Replace, in the second row, third column of Table 605 the term " $I_n$ " by " $I_{nf}$ ".

**8.7.4 Verification of overcurrent discrimination**

Replace the fourth and fifth paragraphs of Subclause 8.7.4 by the following new text:

The test voltage for all fuses is  $\frac{1,1 \cdot U_n}{\sqrt{3}}$  with tolerances of –3 % / +2 %.

### 8.9 Verification of resistance to heat

*Add, at the beginning of Subclause 8.9, the following new text:*

These tests apply to fuse-links and fuse-bases.

#### Figure 601 – Fuse-links with cylindrical caps

*In the third row, second column of the table in Figure 601, replace "38 ± 0,6" by "+0,9 / –0,6".*

#### Figure 602 – Fuse-links with cylindrical contact caps with striker – Additional dimensions for sizes 14 × 51 and 22 × 58 only

*Add the word "NOTE" at the beginning of the sentence immediately following Figure 602.*

#### Figure 603 – Base for fuse-links with cylindrical caps

*In the second row, second column of the table in part 1 of Figure 603, replace "16" by "25",*

*In the third row, second column of the table in part 1 of Figure 603, replace "25" by "32".*

#### Fuse system G – Fuses with fuse-links with offset blade contacts (BS clip-in fuse system)

#### Figure 704 – Time-current zones for "gG" fuse-links

*Delete the phrase "Dimensions in millimeters".*

#### Fuse system H – Fuses with fuse-links having "gD" and "gN" characteristics (class J, class T, and class L time delay and non time delay fuse types)

### 6.1 Markings of fuse-holders

*Replace the text of Subclause 6.1 by the following new text:*

"In addition to IEC 60269-1, the following marking applies:

– size or reference."

#### Figure 802 – Class L fuse-links (700 A to 6 000 A)

*In row E, fifth column of the table in Figure 802, replace "130" by "128".*

**Figure 803 – Fuse-base and contacts for class J fuse-links 1 A to 600 A**

Replace the last two columns of the table in Figure 803 with the following new columns:

<i>i</i>	–
Diameter clearance hole	Diameter of stud
–	–
–	–
6,75	6,0
6,75	6,0
10,5	10,0
12,5	12,0

**Figure 806 – Fuse-base and contacts for class T fuse-links 1 A to 1 200 A**

Replace the table in Figure 806 by the following new table:

Drawing	<i>I<sub>n</sub></i> Max A	Dimensions mm										
		<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i</i>	<i>j</i>	
		Minimum width contact clips	Distance between contact clips	Minimum distance between end stops	Nominal diameter fuse-link	Minimum width of rejection slot	Minimum width of end stop	Max.	Clearance hole spacing	Diameter clearance hole	Minimum clearance	Diameter of stud
A	30	7,3	23,6	39,12	14,30	–	3,18	–	–	–	–	–
	60	9,9	18,8	40,64	20,62	1,72	3,18	–	–	–	–	–
B	100	–	–	–	–	–	–	8,46	6,35	7,14	76,02	6,47
	200	–	–	–	–	–	–	10,41	63,67	8,94	83,57	7,93
	400	–	–	–	–	–	–	12,19	69,06	10,31	93,10	9,47
	600	–	–	–	–	–	–	14,22	11,11	12,29	102,21	11,45
	800	–	–	–	–	–	–	16,0	12,70	13,89	110,95	13,03
	1200	–	–	–	–	–	–	15,03	14,29	15,47	134,68	14,63

**Fuse system J – Fuses with fuse-links having "gD class CC" and "gN class CC" characteristics (class CC time delay and non-time delay fuse types)**

**1.1 Scope**

Delete, in the first paragraph of Subclause 1.1, the references to Figures 1003 and 1004.

**6.1 Markings of the fuse-holders**

Replace the text of Subclause 6.1 by the following new text:

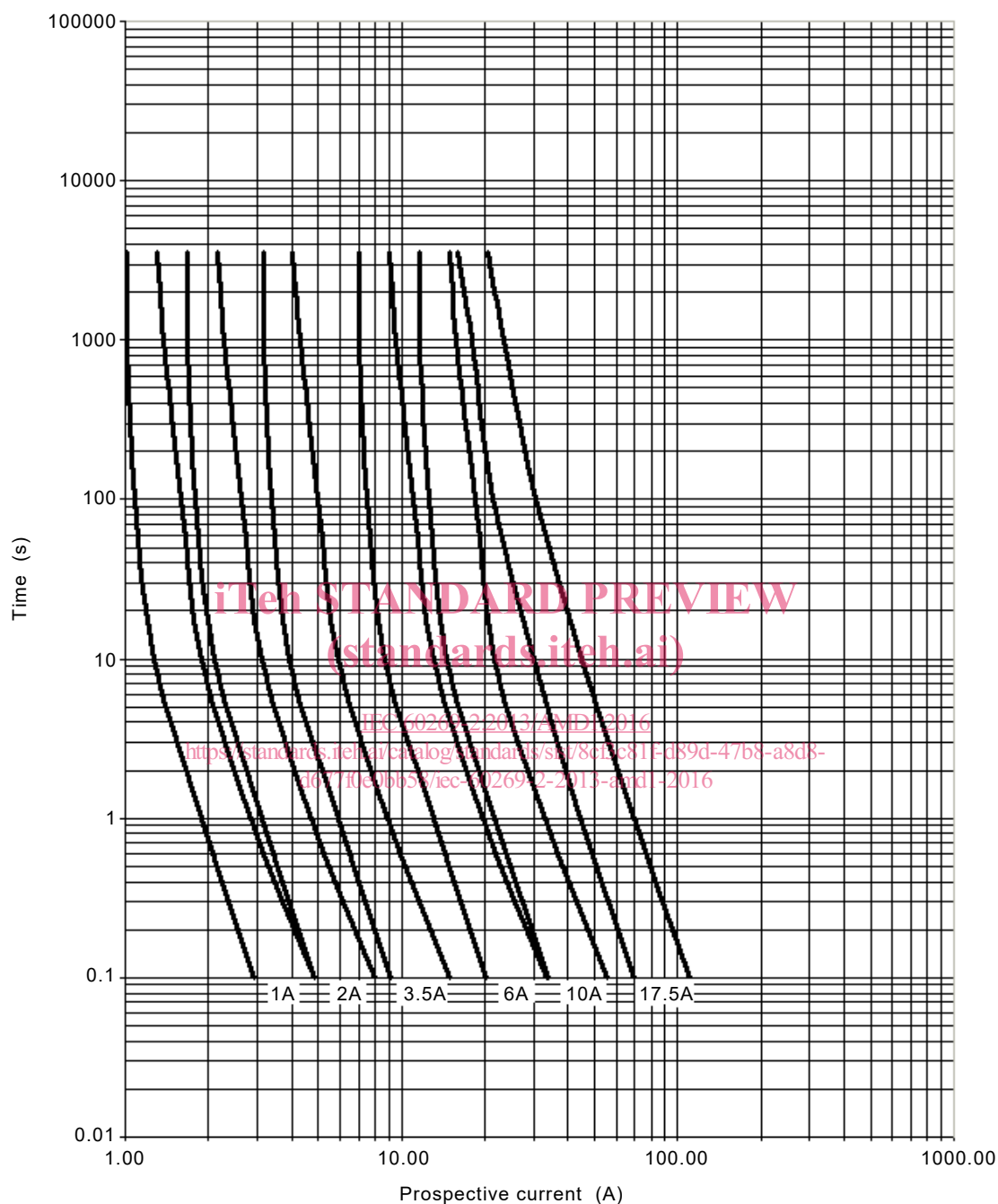
"In addition to IEC 60269-1, the following marking applies:

- size or reference."



**Figure 1007 – Time-current zones for class CC "gN" fuses**

Replace the existing Figure 1007 by the following new Figure 1007:



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**Fuse system K – gK fuse-links with blade contacts for bolted connections – High current fuse-link ratings from 1 250 A up to 4 800 A (Master fuse-links)**

**8.4.3.1 Verification of conventional non-fusing and fusing current**

Replace the text of Subclause 8.4.3.1 with the following new text:

In case the non-fusing current test is also used for the verification of the time-current characteristic a second test specimen shall be used for b).

**8.7 Verification of  $I^2t$  characteristics and over-current selectivity**

*Replace the last two sentences before Table 1108 by the following new text:*

The test voltage for all fuses is  $\frac{1,1 \times U_n}{\sqrt{3}}$  with tolerances of –3 % / +2 %.

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