

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

AMENDMENT 1  
AMENDEMENT 1

**Thermal-links – Requirements and application guide**

**Protecteurs thermiques – Exigences et guide d'application**

Document Preview

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

## THERMAL-LINKS – REQUIREMENTS AND APPLICATION GUIDE

### AMENDMENT 1

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Amendment 1 to IEC 60691:2023 has been prepared by subcommittee 32C: Miniature fuses, of IEC technical committee 32: Fuses.

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

Draft	Report on voting
32C/645/FDIS	32C/648/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 Amendment 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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications/](http://www.iec.ch/publications/).

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- reconfirmed,
- withdrawn, or
- revised.

**Table 5 – Test current for interrupting test**

Replace existing Table 5 with the following new table:

Type of rating	Rated in	Test current	Power factor	Time constant
Resistive	AC amperes	1,5 times rated current	0,95 to 1,0	-
	DC amperes	1,5 times rated current	-	< 1 ms
Inductive	AC amperes	1,5 times rated current	0,6	-
Motor	AC locked rotor amperes (LRA)	6 times full-load current <sup>a</sup>	0,4 to 0,5	-
	DC amperes	10 times full-load rated current	-	2 ms to 5 ms
Pilot duty	AC volt-amperes	b	0,35	-
Electric discharge lamp	AC amperes	4 times rated current	0,4 to 0,5	-
Resistive/Inductive Combination	c	c	c	c

<sup>a</sup> Or the specified value, such as horsepower, if locked rotor ampere rating is omitted.  
<sup>b</sup> See 10.3.2.8.  
<sup>c</sup> According to manufacturer's declaration (only in combination with resistive / inductive load).

### H.9.5 Insulating materials

Replace the existing text of the first paragraph of H.9.5.101 (before the listed items) with the following new text:

Polymeric material used to make the housing of the thermal-link packaged assembly shall have the ratings listed below or be tested, at the specified thickness, in accordance with the relevant standards. The epoxy or potting compound that is in contact with a live part shall not be subjected to the requirements of H.9.5.101 except items c) and e). For small parts and insignificant mass as defined in IEC 60695-2-11:2021, the GWIT test per item c) is not applicable.

Replace the existing text of item c) of H.9.5.101 by the following new text:

- c) glow-wire ignition test (GWIT) of 750 °C in accordance with IEC 60695-2-13;

#### **I.11.2.1**

*Add the following new text at the end of I.11.2.1:*

The selected wire size should be the smallest cross-sectional area specified in Table 2 of IEC 60730-1:2022.

#### **I.11.2.3**

*Add the following new note at the end of I.11.2.3:*

NOTE A thermocouple is arranged at the center of the huge mass metal block to monitor its body temperature. The recommended size of the huge mass metal block is no less than 250 mm × 110 mm × 60 mm.

*Replace the existing text of I.11.2.4 with the following new text:*

**I.11.2.4** The test fixture assembly with three specimens in series will be placed in the static-air oven which is stabilized to the  $T_h$  temperature specified by the manufacturer. When the temperature difference between the static-air oven and the huge mass metal block is within 1 °C, the thermal-links will be energized with the resistive rated current for 24 h or as declared by manufacturer, whichever is higher.

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