
INTERNATIONAL STANDARD



1547

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Aircraft — Precision fuse-links — General requirements

Aéronefs — Porte-fusible de précision — Spécifications techniques

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 20 has reviewed ISO Recommendation R 1547 and found it technically suitable for transformation. International Standard ISO 1547 therefore replaces ISO Recommendation R 1547-1971 to which it is technically identical.

ISO Recommendation R 1547 was approved by the Member Bodies of the following countries :

Australia	Israel	Spain
Belgium	Italy	Switzerland
Canada	New Zealand	Thailand
Czechoslovakia	Peru	Turkey
Egypt, Arab Rep. of	Poland	United Kingdom
Greece	South Africa, Rep. of	

The Member Bodies of the following countries expressed disapproval of the Recommendation on technical grounds :

Germany
Netherlands
U.S.S.R.

The Member Bodies of the following countries disapproved the transformation of ISO/R 1547 into an International Standard :

Germany
U.S.S.R.

Aircraft — Precision fuse-links — General requirements

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the general requirements for precision fuse-links suitable for use in aircraft electrical systems having voltage and frequency characteristics conforming to ISO/R 222, at any ambient temperature from -65 to $+85$ °C, and all altitudes from 0 to 24 000 m. (See also ISO 1540.)

Where mention is made of "the relevant International Standard", this refers to ISO 1548 or ISO 1549.

2 REFERENCES

ISO/R 222, *Voltages for aircraft electrical systems.*

ISO/R 469, *Dimensions and conductor resistance of general purpose electrical cables with copper conductors, for aircraft.*

ISO/R 474, *Performance requirements for general purpose electrical cables with copper conductors for aircraft.*

ISO 1540, *Aerospace — Aircraft electrical systems — Characteristics.*¹⁾

ISO 1548, *Aircraft — Precision fuse-links — Type A.*

ISO 1549, *Aircraft — Precision fuse-links — Type B.*

ISO 2650, *Environmental tests for aircraft equipment — Part 1 : Scope and applicability*

IEC Publication 269, *Low-voltage fuses — Part I : General requirements.*

3 TERMINOLOGY

The terminology used in this International Standard is in conformity with IEC Publication 269, as far as practicable.

4 DIMENSIONS

The dimensions of the fuse-links shall comply with the relevant International Standard.

5 TEMPERATURE AND ALTITUDE RATING

5.1 The fuse-links shall be suitable for use in all ambient temperatures from -65 to $+35$ °C and at all altitudes up to 24 400 m.

5.2 For ambient temperatures between 35 and 85 °C, the fuse-link shall be de-rated by 0,4 % of normal rated current for every one degree Celsius increase in ambient temperature above 35 °C.

6 CURRENT, VOLTAGE AND BREAKING-CAPACITY RATINGS

The current ratings, the voltage ratings, and the breaking-capacity ratings of the fuse-links shall be in accordance with the relevant International Standard.

7 ENVIRONMENT

The fuse-links shall comply with the requirements of the appropriate tests listed in ISO 2650, including vibration (other than direct engine-mounting), acceleration, crash conditions, climatic and explosion-proofness. They shall not support mould growth and shall not deteriorate even after storage for long periods in the tropics.

8 TEMPERATURE RISE

When the fuse-link is suitably mounted and attached to a cable complying with ISO/R 469, of the rating specified in the relevant International Standard, using an appropriate termination and carrying rated current continuously, the temperature of the attached cable due to the combined effects of ambient and temperature rise shall not exceed the safe value for the insulation as specified in ISO/R 474.

9 TIME/CURRENT CHARACTERISTICS

The pre-arcing time/current characteristics of the fuse-links shall comply with the requirements of the relevant International Standard.

1) At present at the stage of draft.