



**SLOVENSKI STANDARD**  
**oSIST prEN 3475-604:2024**  
**01-december-2024**

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**Aeronavtika - Električni kabli za uporabo v zračnih plovilih - Preskusne metode - 604. del: Odpornost proti električnemu obloku v suhih razmerah**

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 604: Resistance to dry arc propagation

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren - Teil 604: Lichtbogenfestigkeit, trocken

Série aérospatiale - Câbles électriques à usage aéronautique - Méthodes d'essais - Partie 604 : Résistance à l'amorçage et à la propagation d'arc électrique, essai à sec

**Ta slovenski standard je istoveten z: prEN 3475-604**

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**ICS:**

29.060.20	Kabli	Cables
49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems

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**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 3475-604**

October 2024

ICS 49.060

Will supersede EN 3475-604:2018

English Version

## Aerospace series - Cables, electrical, aircraft use - Test methods - Part 604: Resistance to dry arc propagation

Série aérospatiale - Câbles électriques à usage  
aéronautique - Méthodes d'essais - Partie 604 :  
Résistance à l'amorçage et à la propagation d'arc  
électrique, essai à sec

Luft- und Raumfahrt - Elektrische Leitungen für  
Luftfahrtverwendung - Prüfverfahren - Teil 604:  
Lichtbogenfestigkeit, trocken

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

**Warning** : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (prEN 3475-604:2024) has been prepared by ASD-STAN.

After enquiries and votes carried out in accordance with the rules of this Association, this document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 3475-604:2018.

The main changes with respect to the previous edition are as follows:

- EN 3475-604 (P3), 01/2018:
  - o scope: addition of a specification regarding 230 VAC test condition;
  - o revision of test method to update the electrical schematic circuit and add the tripping curve.

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## prEN 3475-604:2024 (E)

### 1 Scope

This document specifies a method for appraising the behaviour of cable insulation when an electric arc is initiated and maintained by two (2) powered cables rubbing against a blade.

This document is intended to be used together with EN 3475-100.

The primary aim of this test is:

- to produce, in a controlled fashion, continuous failure effects, which are representative of those, which can occur in service when a typical cable bundle is damaged by abrasion such that electrical arcing occurs, both between the cables and conductive structure; and
- to examine the aptitude of the insulation to track, to propagate electric arc to the electrical origin.

Originally defined for 115 VAC network, this test also proposes conditions for 230 VAC network. However, for 230 VAC test condition only, the test EN 3475-605 can overrule and be applied as test governance as it has been demonstrated that test EN 3475-605 is more stringent, repeatable and reproducible.

Unless otherwise specified in the product standard, only 115 VAC conditions are satisfied.

Six levels of prospective fault current have been specified for concerned cable sizes (see Clause 8). It is agreed that larger sizes need not be assessed since the short-circuit phenomenon becomes dominant at low line impedances.

Unless otherwise specified in the technical/product standard, sizes 002, 006 and 020 cable are assessed.

### 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.

EN 2350, *Aerospace series — Circuit breakers — Technical specification*

EN 2702, *Aerospace series — Aluminium alloy AL-P6061 — T6 or T62 — Drawn or extruded bar and section — a or D ≤ 200 mm*

EN 3475-302, *Aerospace series — Cable, electrical, aircraft use — Test methods — Part 302: Voltage proof test*

A-A-52083,<sup>1</sup> *Tape, lacing and tying, glass*

### 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

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<sup>1</sup> Published by Department of Defense (DoD), available at: <https://assist.dla.mil/online/start/>.