Draft for Public Comment

Form 36

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Responsible committee: ACE/6 Aerospace avionic electrical and fibre optic technology

Interested committees:

Title: Draft BS EN 3475-604 BS Aerospace series - Cables, electrical, aircraft use - Test methods. Part 604: Resistance to dry arc propagation.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

i) has any issues related to 3rd party IPR, patent or copyright
ii) affects other national standard(s)
iii) requires additional national guidance or information

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This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

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Responsible Committee Secretary: Committee Service Centre (BSI)
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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at **https://standardsdevelopment.bsigroup.com/**. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx

1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex **(e.g. 3.1)**	Paragraph/ Figure/Table/Note	**Type of comment**	**Commend (justification for change) by the MB**	**Proposed change by the MB**	**Secretariat observations on each comment submitted**
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

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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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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 reproductible.

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,[1] *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/

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

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