BRITISH STANDARD

BS EN
6059-501:2010

Aerospace series — Electrical cables, installation — Protection sleeves — Test methods

Part 501: Voltage proof test

ICS 49.060

National foreword

This British Standard is the UK implementation of EN 6059-501:2010.

The UK participation in its preparation was entrusted to Technical Committee ACE/6, Aerospace avionic electrical and fibre optic technology.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2010.

ISBN 978 0 580 62005 8

Amendments/corrigenda issued since publication

Date	Comments

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 6059-501

April 2010

ICS 49.060

English Version

Aerospace series - Electrical cables, installation - Protection sleeves - Test methods - Part 501: Voltage proof test

Série aérospatiale - Câbles électriques, installation - Gaines de protection - Méthodes d'essais - Partie 501 : Tenue en tension

Luft- und Raumfahrt - Elektrische Leitungen, Installation - Schutzschläuche - Prüfverfahren - Teil 501: Spannungsfestigkeit

This European Standard was approved by CEN on 16 January 2010.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 6059-501:2010: E

Contents

Page

Foreword

This document (EN 6059-501:2010) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

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

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies a method of performing voltage proof tests on finished protection sleeves.

It shall be used together with EN 6059-100.

2 Normative references

The following referenced documents are indispensable for the application 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 6059-100, *Aerospace series — Electrical cables, installation — Protection sleeves — Test methods — Part 100: General*

3 Dielectric test

3.1 Equipment

The dielectric equipment is composed of an electrical generator and a test fixture.

The test fixture is composed of a structure containing several rows of metallic ball chains and a metallic mandrel.

The negative pole of the electrical generator is connected to the metallic mandrel with a clip.

The positive pole is connected to the metallic ball chains and the metallic frame.

See a type of equipment in Annex A (informative).

3.2 Preparation of specimens

The specimen and the metallic mandrel are 50 cm long.

The external diameter of the metallic mandrel shall be as closed as possible to the internal diameter of the protection sleeve to test.

The specimen is installed on the metallic mandrel which is connected to the negative pole of the generator.

The assembly is installed into the chamber so that the ball chains are only in contact with the specimen and not with the mandrel. The not protected part of the metallic mandrel which allows the connection must be kept out of the chamber.

3.3 Test procedure

The protection sleeve shall be subject to a voltage test at ambient temperature.

The voltage specified by the technical specification with a frequency of 40 Hz to 60 Hz, shall be applied for at least 1 min between the metallic ball chains and the mandrel.

The voltage rise time shall be between 300 V/s and 500 V/s.

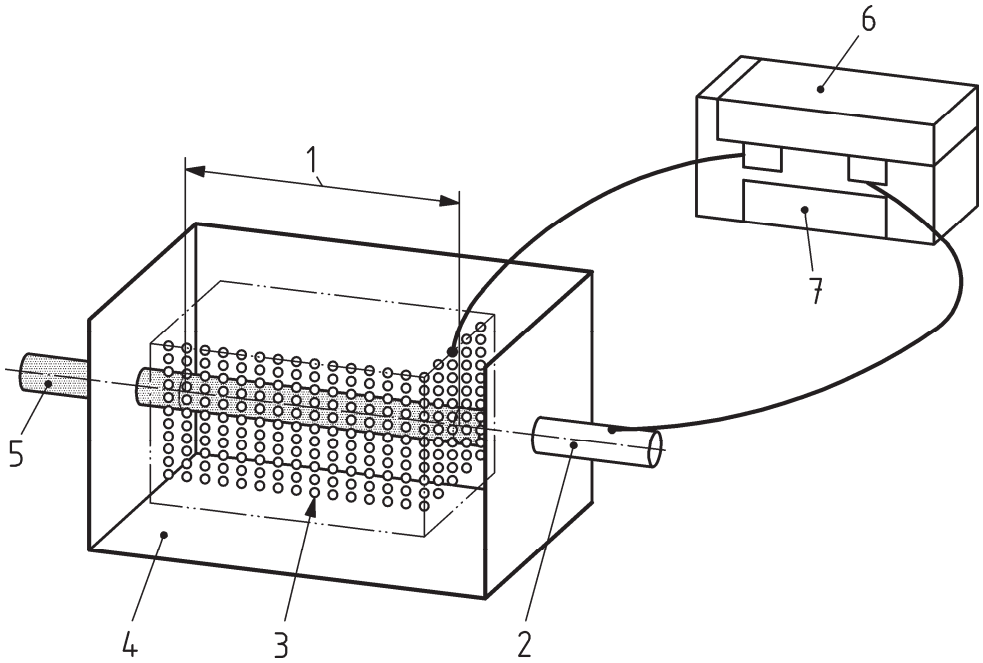
After 1 min at the value defined in the product standard, the test should be stopped.

3.4 Requirement

There shall be no electrical perforation of the sleeve and no evidence of damage.

Annex A
(informative)

Schematic drawing of the dielectric equipment



Key

1 Specimen under test: 400 mm
2 Metallic mandrel
3 Metallic ball chains
4 Test fixture
5 Sleeve protection
6 Electrical generator
7 Value kilovolts (kV)

Figure A.1

BSI - British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover. Tel: +44 (0)20 8996 9000. Fax: +44 (0)20 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: +44 (0)20 8996 9001. Fax: +44 (0)20 8996 7001 Email: orders@bsigroup.com You may also buy directly using a debit/credit card from the BSI Shop on the Website http://www.bsigroup.com/shop

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact Information Centre. Tel: +44 (0)20 8996 7111 Fax: +44 (0)20 8996 7048 Email: info@bsigroup.com

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration. Tel: +44 (0)20 8996 7002 Fax: +44 (0)20 8996 7001 Email: membership@bsigroup.com

Information regarding online access to British Standards via British Standards Online can be found at http://www.bsigroup.com/BSOL

Further information about BSI is available on the BSI website at http://www.bsigroup.com.

Copyright

BSI Group
Headquarters 389
Chiswick High Road,
London, W4 4AL, UK
Tel +44 (0)20 8996 9001
Fax +44 (0)20 8996 7001
www.bsigroup.com/
standards