



SLOVENSKI STANDARD
SIST EN 3475-100:2010

01-december-2010

Nadomešča:

SIST EN 3475-100:2004

Aeronavtika - Električni kabli za uporabo v zračnih plovilih - Preskusne metode - 100. del: Splošno

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 100: General

Luft- und Raumfahrt - Elektrische Leitungen für Luftfahrtverwendung - Prüfverfahren - Teil 100: Allgemeines

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Série aérospatiale - Câbles électriques à usage aéronautique - Méthodes d'essais - Partie 100 : Généralités

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Ta slovenski standard je istoveten z: EN 3475-100:2010

ICS:

49.060

Letalska in vesoljska
električna oprema in sistemi

Aerospace electric
equipment and systems

SIST EN 3475-100:2010

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3475-100

September 2010

ICS 49.060

Supersedes EN 3475-100:2002

English Version

Aerospace series - Cables, electrical, aircraft use - Test methods - Part 100: General

Série aérospatiale - Câbles électriques à usage
aéronautique - Méthodes d'essais - Partie 100: Généralités

Luft- und Raumfahrt - Elektrische Leitungen für
Luftfahrtverwendung - Prüfverfahren - Teil 100:
Allgemeines

This European Standard was approved by CEN on 27 February 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.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 3475-100:2010) 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 March 2011, and conflicting national standards shall be withdrawn at the latest by March 2011.

This document supersedes EN 3475-100:2002.

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.

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EN 3475-100:2010 (E)**1 Scope**

This European Standard gives general information and the list of test methods for the different characteristics required for cables used in aircraft electrical circuits.

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 3475 (all parts) *Aerospace series — Cables, electrical, aircraft use — Test methods*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

- 3.1 conductor**
conducting element of a cable formed from one or more strands
- 3.2 strand**
metallic cylindrical component of uniform section used to form the conductor or shielding
- 3.3 plated strand**
strand covered by a thin metallic layer in order to improve performance or facilitate connections
- 3.4 jacket**
external covering of a cable containing one or more screened or unscreened conductor(s)
- 3.5 insulation**
part of the cable surrounding the conductor and consisting of insulating material
- 3.6 sheath**
protective envelope added to the insulated conductor when necessary to improve its properties of mechanical resistance or resistance to fluids
- NOTE It may also be added to provide a surface to facilitate marking.
- 3.7 screen**
conducting envelope applied to the cable or conductors so as to reduce electromagnetic or electrostatic interference

3.8**concentric conductor**

assembly comprising several strands, all arranged in the form of a spiral, in regular layers

NOTE The directions of lay of the strand, passing from one stranded layer to the next layer is either alternate or the same. The lay for the various layers may be different or the same.

3.9**bunched conductor**

assembly of several strands, all arranged in the form of a spiral, in the same direction and with the same lay

3.10**rope stranded conductor**

assembly comprising a certain number of concentric or bunched conductors arranged in the form of a spiral and in regular layers, the different layers being laid in opposite directions

3.11**specimen**

portion of conductor or cable of defined length, taken from a particular section of cable

3.12**insulated conductor**

the whole of the conductor and its insulation which makes up a complete cable with one or more conductors

3.13**cable, electrical**

assembly consisting of conductor, insulation and, where applicable, sheath, screen and jacket

3.14**airframe cable**

cable suitable for open aircraft wiring and engine compartments without additional protection

3.15**fire-resistant cable**

cable which is capable of maintaining a defined performance during the application of a standard 1 100 °C flame for a period of 5 min

3.16**fire proof cable**

cable which is capable of maintaining a defined performance during the application of a standard 1 100 °C flame for a period of 15 min

3.17**conductor cross-sectional areas**

sums of the cross-sectional areas of the component strands of the conductor

3.18**conductor size**

number used to define the gauge of the conductor, this number corresponds approximately to the American Wire Gauge number

3.19**direction of cabling (or lay)**

"lefthand" direction of lay is shown in the sketch below

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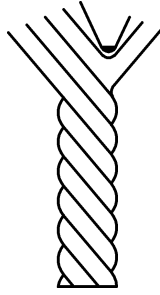
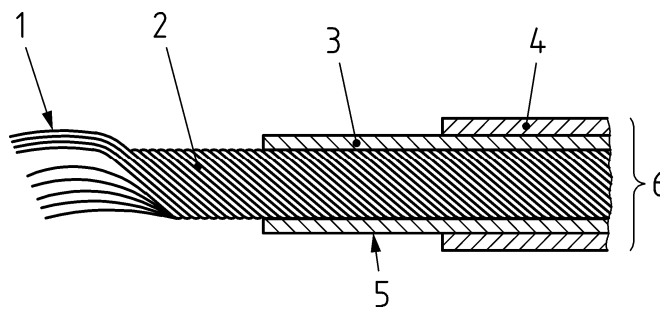


Figure 1 — Lefthand lay

**Key**

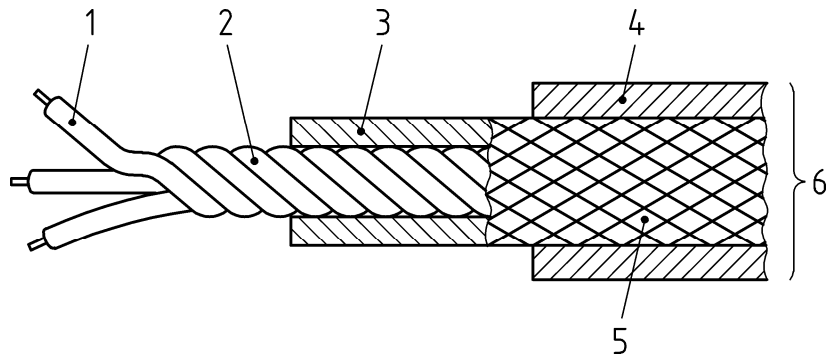
- 1 Strands
- 2 Conductor
- 3 Insulation
- 4 Sheath
- 5 Core or insulated conductor
- 6 Complete cable/wire

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Figure 2 — Equivalence of terms and designations

**Key**

- 1 Core
- 2 Cabled cores
- 3 Inner sheath
- 4 Outer jacket
- 5 Screen: braid or spiral screen
- 6 Multicore twisted, screened and jacketed cable (example 3 cores)

Figure 3 — Equivalence of terms and designations

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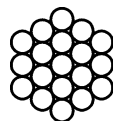
Figure 4 — Conductor

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**Key**

- 1 Strand

Figure 5 — Concentric stranded conductor**Figure 6 — Rope lay strand****Figure 7 — Bunched conductor**