SLOVENSKI STANDARD
SIST EN 2591-6301:2004

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Aerospace series - Elements of electrical and optical connection - Test methods - Part 6301: Optical elements - Endurance at temperature

Aerospace series - Elements of electrical and optical connection - Test methods - Part 6301: Optical elements - Endurance at temperature

Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 6301: Optische Elemente - Temperaturbeständigkeit

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 6301 : Organes optiques - Endurance en température

Ta slovenski standard je istoveten z: **EN 2591-6301:2001**

ICS:

49.060	Letalska in vesoljska elektriļ na oprema in sistemi	Aerospace electric equipment and systems

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EUROPEAN STANDARD

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English version

Aerospace series - Elements of electrical and optical connection - Test methods - Part 6301: Optical elements - Endurance at temperature

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Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 6301: Optische Elemente - Temperaturbeständigkeit

This European Standard was approved by CEN on 4 June 2001.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

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Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries 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 AECMA, 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 May 2002, and conflicting national standards shall be withdrawn at the latest by May 2002.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies a method of checking the ability of optical connection elements (including permanent connections) and fibre optic couplers to withstand elevated temperatures.

It shall be used together with EN 2591-100.

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 2591-100	Aerospace series – Elements of electrical and optical connection – Test methods – Part 100: General [1)]
EN 2591-205	Aerospace series – Elements of electrical and optical connection – Test methods – Part 205: Housing (shell) electrical continuity
EN 2591-301	Aerospace series – Elements of electrical and optical connection – Test methods – Part 301: Endurance at temperature
EN 2591-601	Aerospace series – Elements of electrical and optical connection – Test methods – Part 601: Optical elements - Insertion loss
EN 2591-602	Aerospace series – Elements of electrical and optical connection – Test methods – Part 602: Optical elements – Variation of attenuation and optical discontinuity
EN 2591-6101	Aerospace series – Elements of electrical and optical connection – Test methods – Part 6101: Optical elements – Visual examination
EN 2591-6409	Aerospace series – Elements of electrical and optical connection – Test methods – Part 6409: Optical elements – Contact retention in insert [2)]

3 Preparation of specimens

3.1 Specimens shall be fitted with normal accessories and terminated in accordance with the product standard. Cavities with unterminated contacts shall have filler plugs fitted (where applicable). The contacts shall be connected in series and the optical connection elements shall be mated (where applicable).

3.2 Unless otherwise indicated in the technical specification, the following details shall be specified:

See EN 2591-301 (if applicable) plus:

- type and length of cable/fibre;
- maximum value of insertion loss;
- maximum permissible variation of attenuation.

1) Published as AECMA Prestandard at the date of publication of this standard
2) In preparation at the date of publication of this standard

4 Apparatus

See EN 2591-301 and EN 2591-602 plus:

– a climatic chamber.

5 Method

5.1 Test conditions

Specimens with optical contacts shall be subjected to test method B of EN 2591-301 without load.

Specimens with optical contacts and electrical contacts shall be subjected to test method A of EN 2591-301.

5.2 Procedure

Connect the specimens to the LLS and LDS systems.

Place the specimens in the chamber for a period as specified in the product standard.

Proceed with the test and monitor continuously the variation of attenuation (EN 2591-602 – Method A) throughout the test.

While the temperature is being increased, there shall be no variation of attenuation attributable to the connection in excess of that defined in the product standard.

5.3 Recovery

As in EN 2591-301.

5.4 Final measurements and requirements

For each optical circuit (if applicable).

The specimens shall be subjected to the sequence of tests listed below and shall satisfy the requirements of the product standard.

– EN 2591-601 – Insertion loss - Method 1
– EN 2591-6101 – Visual examination
– EN 2591-205 – Housing (shell) electrical continuity (if applicable)
– EN 2591-6409 – Contact retention in insert (if applicable)