SLOVENSKI STANDARD
SIST EN 2591-321:2001

01-januar-2001

Aerospace series - Elements of electrical and optical connection - Test methods - Part 321: Damp heat, cyclic test

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Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 321: Feuchte Wärme, zyklische Prüfung

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 321: Chaleur humide, essai cyclique

Ta slovenski standard je istoveten z: **EN 2591-321:1997**

ICS:

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

SIST EN 2591-321:2001 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 2591-321

October 1997

ICS 49.060

Descriptors: aircraft industry, aircraft equipment, connecting equipment, test

English version

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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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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of an identical text or by endorsement, at the latest by April 1998, and conflicting national standards shall be withdrawn at the latest by April 1998.

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 (cyclic test) of assessing the ability of elements of connection to function under conditions of damp heat.

It shall be used together with EN 2591.

This method forms part of test EN 2591-302.

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	Aerospace series - Elements of electrical and optical connection - Test methods - General
EN 2591-101	Aerospace series - Elements of electrical and optical connection - Test methods - Part 101: Visual examination
EN 2591-206	Aerospace series - Elements of electrical and optical connection - Test methods - Part 206: Measurement of insulation resistance
EN 2591-302	Aerospace series - Elements of electrical and optical connection - Test methods - Part 302: Climatic sequence [1]
EN 2591-408	Aerospace series - Elements of electrical and optical connection - Test methods - Part 408: Mating and unmating forces [1]

3 Preparation of specimens

3.1 Specimens shall be prepared according to the technical specification. Cable ends shall be allowed through the test chamber or sealed.

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

- specimens mated or unmated and fitted with protective covers;
- mounting method, type of cable and definition of wiring of specimens;
- number of cycles: 2 or 10;
- type of preconditioning;
- initial measurements (if applicable);
- final measurements and requirements (if applicable);
- method according to EN 2591-206 and insulation resistance value;
- method according to EN 2591-408 and values of mating and unmating forces.

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

4 Apparatus

The test chamber shall be designed so that its temperature and relative humidity are controlled.

Damp air shall be circulated within the test chamber.

Condensed water from chamber walls or ceiling shall not drip on the specimens.

5 Method

5.1 Preconditioning

The specimens shall be preconditioned for at least 1 h as specified.

5.2 Initial measurements (if applicable)

They shall be carried out as specified.

5.3 Procedure

The specimens shall be placed in the test chamber as specified. The procedure shall consist of the following phases:

- Phase 1: within 2 h, the temperature of the test chamber shall be raised to (65 ± 3) °C and the relative humidity increased to $\left[\begin{smallmatrix}+2\\95\\-3\end{smallmatrix}\right]$ %.
- Phase 2: the above conditions shall be maintained for 6 h.
- Phase 3: within 16 h the temperature shall be progressively reduced to $\left[\begin{smallmatrix}+4\\38\\0\end{smallmatrix}\right]$ °C, while the relative humidity is maintained as high as possible and shall not decrease below 85 %.

These three phases (see figure 1) constitute one cycle. The number of cycles to be carried out shall be as specified.

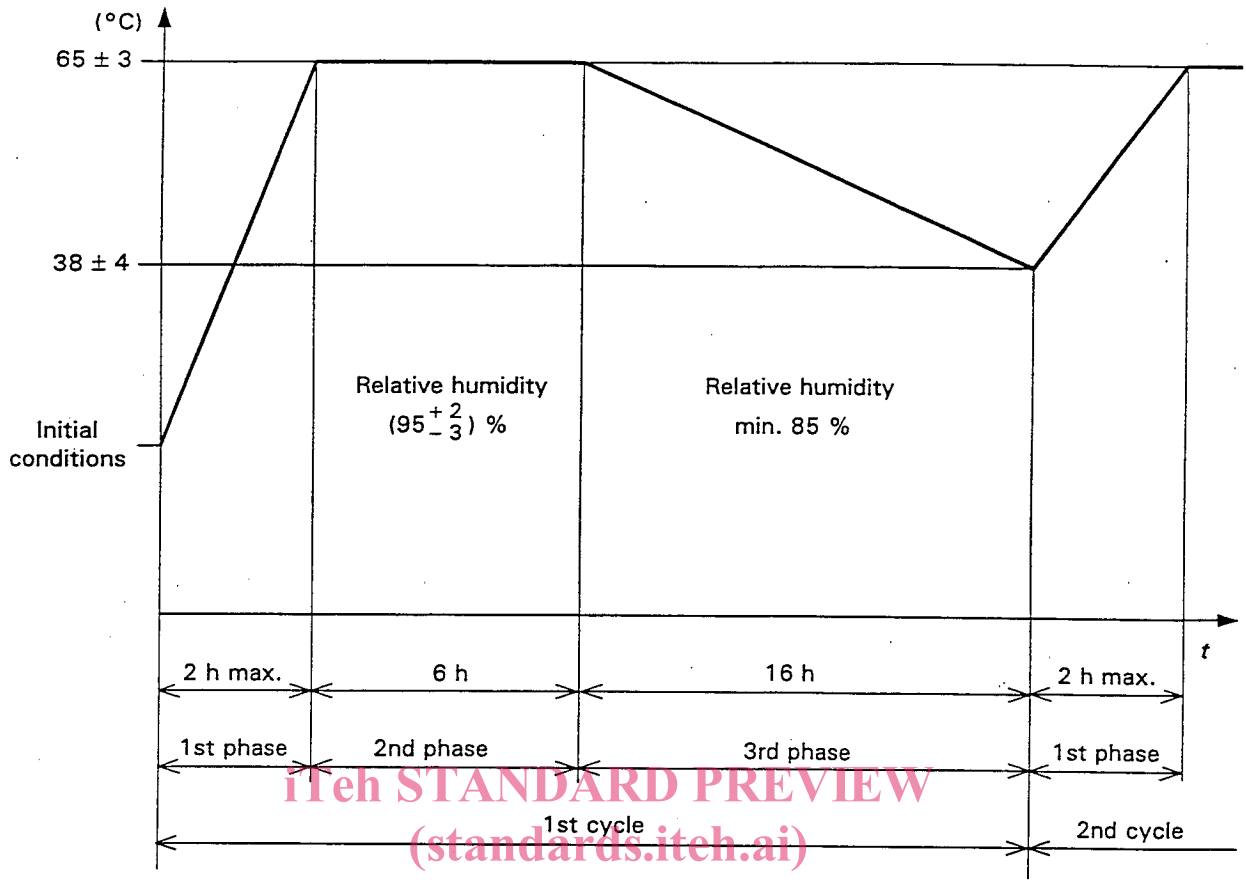

Figure 1

5.4 Final measurements and requirements (if applicable)

Immediately after the last cycle, (unless otherwise specified), the specimens shall be subjected to the following test sequence:

- EN 2591-206: at ambient temperature;
- EN 2591-408;
- EN 2591-101: visual examination with inspection for corrosion points.