SLOVENSKI STANDARD
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Aerospace series - Elements of electrical and optical connection - Test methods - Part 407: Durability of contact retention system and seals

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Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 407: Beständigkeit der Kontakthalterungen und -dichtung

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 407: Endurance du systeme de rétention et d'étanchéité des contacts

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This European Standard was approved by CEN on 23 February 1998.

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.

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
EUROPAISCHES 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of an identical text or by endorsement, at the latest by September 1999, and conflicting national standards shall be withdrawn at the latest by September 1999.

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 assessing the durability of contact retention system and seals of elements of connection subjected to repeated contact insertion/extraction.

It shall be used together with EN 2591.

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 2591-312	Aerospace series - Elements of electrical and optical connection - Test methods - Part 312: Air leakage
EN 2591-313	Aerospace series - Elements of electrical and optical connection - Test methods - Part 313: Driving rain (artificial)
EN 2591-314	Aerospace series - Elements of electrical and optical connection - Test methods - Part 314: Immersion at low air pressure
EN 2591-409	Aerospace series - Elements of electrical and optical connection - Test methods - Part 409: Contact retention in insert
EN 2591-412	Aerospace series - Elements of electrical and optical connection - Test methods - Part 412: Contact insertion and extraction forces
EN 2591-D26	Aerospace series - Elements of electrical and optical connection - Test methods - Part D26: Contact retention system effectiveness (removable contact walkout) [1]

3 Preparation of specimens

3.1 Specimens shall be prepared according to the technical specification.

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

- mounting method, type of cable and definition of specimen wiring (all accessories shall be removed);
- insertion/extraction tools;
- initial measurements (if applicable);
- final measurements (if applicable).

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

4 Method

4.1 Initial measurements (if applicable)

Specimens shall be submitted to the following test sequence:

- EN 2591-409;
- EN 2591-412;
- EN 2591-312 or EN 2591-313 or EN 2591-314.

4.2 Number of contacts to be tested for each size

See table 1.

Table 1

Number of contacts	Number to be tested %
1 to 5	100
6 to 60	50 (with a minimum of 6 specimens)
61 to 130	25 (with a minimum of 31 specimens)
≥ 131	10 (with a minimum of 34 specimens)

At least one contact shall be close to the insert periphery and one near the centre.

Selected contacts shall not have been removed previously.

4.3 Procedure

Each contact shall be inserted and extracted 10 times with the specified tools.

4.4 Final measurements (if applicable)

The specimens shall be subjected to the following test sequence:

- EN 2591-409;
- EN 2591-412;
- EN 2591-101;
- EN 2591-312 or EN 2591-313 or EN 2591-314;
- EN 2591-D26, this test shall be carried out using new contacts.