



**SLOVENSKI STANDARD**  
**SIST EN 2591-409:2001**  
**01-januar-2001**

**Aerospace series - Elements of electrical and optical connection - Test methods - Part 409: Contact retention in insert**

Aerospace series - Elements of electrical and optical connection - Test methods - Part 409: Contact retention in insert

Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 409: Festsitzen des Kontaktes im Kontakteinsatz

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 409: Rétention du contact dans l'isolant

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**Ta slovenski standard je istoveten z: EN 2591-409:1999**

**ICS:**

49.060 Štejni in optični elementi za povezavo električnih in optičnih sistemov v letalski in vesoljski opremi in sistemih  
 Aerospace electric equipment and systems

**SIST EN 2591-409:2001**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 2591-409**

March 1999

ICS 49.060

English version

**Aerospace series - Elements of electrical and optical connection  
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Verbindungselemente - Prüfverfahren - Teil 409: Festsitzen  
des Kontaktes im Kontakteinsatz

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.

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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.

THIS STANDARD PREVIEW  
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## 1 Scope

This standard specifies a method of assessing the retention in insert of contacts used in elements of connection subjected to axial loads.

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

## 3 Preparation of specimens

**3.1** The specimens shall be fitted with all their contacts according to the technical specification. Any accessories which are not essential to the retaining system performance shall be removed. If during a test sequence, the specimens are wired, contacts to be tested shall be replaced by unwired contacts.

[SIST EN 2591-409:2001](https://standards.iteh.ai/catalog/standards/sist/f19-491b-5cb9-4580-b5d3-700cba58b1ec/sist-en-2591-409-2001)

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

- mounting of the specimens;
- preload value;
- load to be applied and its application point;
- allowable displacements:
  - 1) under load.
  - 2) after removal of load.
- final measurements and requirements (if applicable).

## 4 Method

### 4.1 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.

### 4.2 Procedure

Each contact shall be submitted to the specified axial preload. The load shall be increased at a rate not exceeding 5 N/s until the specified value is reached and maintained for 10 s.

The maximum contact displacement shall be measured:

- while the load is applied;
- after the load is removed.

This test shall then be repeated in the opposite direction.

### 4.3 Final measurements and requirements (if applicable)

The measured values shall be within the specified limits.

The specimens shall be submitted to a visual examination (EN 2591-101).

No damage which would impair their operation shall be observed.