
Aerospace series - Elements of electrical and optical connection - Test methods - Part 614: Optical elements - Connector radial compression

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Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 614: Optische Elemente - Radiale Belastung des Steckverbinders

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 614: Organes optiques - Compression radiale du connecteur

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ICS:

49.060 Štejni in optični oprema za letalstvo in vesolje
Aerospace electric equipment and systems

SIST EN 2591-614:2004**en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 2591-614

June 2002

ICS 49.060

English version

**Aerospace series - Elements of electrical and optical connection
- Test methods - Part 614: Optical elements - Connector radial
compression**

Série aérospatiale - Organes de connexion électrique et
optique - Méthodes d'essais - Partie 614: Organes optiques
- Compression radiale du connecteur

Luft- und Raumfahrt - Elektrische und optische
Verbindungselemente - Prüfverfahren - Teil 614: Optische
Elemente - Radiale Belastung des Steckverbinders

This European Standard was approved by CEN on 8 February 2002.

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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

This document (EN 2591-614:2002) has been prepared by the European Association of Aerospace Manufacturers (AECMA).

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 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 décembre 2002, and conflicting national standards shall be withdrawn at the latest by décembre 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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom

1 Scope

This standard specifies a method of checking the resistance to radial compression of optical connection elements (including permanent connections) and fibre optic couplers.

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 2591-408	Aerospace series – Elements of electrical and optical connection – Test methods – Part 408: Mating and unmating forces ²⁾
EN 2591-601	Aerospace series – Elements of electrical and optical connection – Test methods – Part 601: Optical elements – Insertion loss ²⁾
EN 2591-6101	Aerospace series – Elements of electrical and optical connection – Test methods – Part 6101: Optical elements – Visual examination
TR 4257	Aerospace series – Elements of electrical and optical connection – Relationship between the numbering systems for parts of EN 2591 ³⁾

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3 Preparation of specimens

3.1 Specimens shall be fitted with the accessories and terminated in accordance with the product standard. Cavities with unterminated contacts shall have filler plugs fitted (where applicable).

If not at standard test conditions, the specimens shall be subjected to standard test conditions and stabilized at these conditions for 24 h as defined in EN 2591-100.

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

- load to be applied and the duration it will be maintained;
- maximum value of insertion loss;
- number of axes to be tested;
- type and length of cable/fibre;
- rate of load application;
- impact surface (length, width, thickness and material) if other than stated in 4.

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

2) See TR 4257.

3) Published as AECMA Technical Report at the date of publication of this standard

4 Apparatus

See EN 2591-601 plus:

- a steel plate of nominal size 300 mm × 500 mm × 25 mm thick as basic test surface;
- parallel to this test surface, and above a relation to its centre, an aluminium plate of nominal size 100 mm × 100 mm × 15 mm thick supporting a piece of material 10 mm thick of 80 shore D hardness shall be used to apply the load (figure 1).

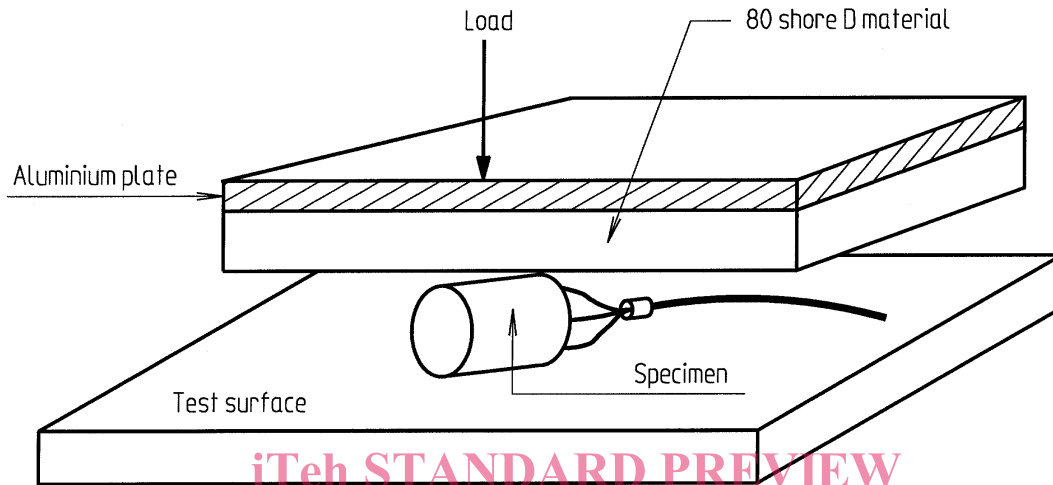


Figure 1

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Figure 2

5 Method

5.1 Procedure

See table 1.

Unless otherwise stated in the product standard, the load and duration of application shall be chosen from any combination of the following values:

Table 1

Load	Duration
500 N	1,5 s
1 000 N	5 s
2 000 N	10 s
5 000 N	60 s

- Connect the specimen to an LLS and LDS (figure 2);
- Set the power level to zero to assure a reference level;
- Disconnect the specimen and place it between the plate and the test surface;
- Apply the load at a duration selected from table 1;
- Remove the load.

NOTE Bulkhead/panel mount receptacles are not required to be tested.

5.2 Final measurements and requirements

- EN 2591-6101
- Connect again the specimen to the former receptacle
- EN 2591-408 (applicable to non permanent connections only)
- EN 2591-601

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