



**SLOVENSKI STANDARD
SIST EN 2591-428:2004**

01-maj-2004

Aerospace series - Elements of electrical and optical connection - Test methods - Part 428: Sinusoidal vibrations with passage of current for crimped terminal lugs

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Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 428: Vibration, sinusförmig, bei Stromfluß, für gecrimpte Kabelschuhe

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 428: Vibrations sinusoïdales avec passage de courant pour cosses serties

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Ta slovenski standard je istoveten z: EN 2591-428:2002

ICS:

49.060 Štejni inštrumenti in oprema za električno in optično povezavo
Aerospace electric equipment and systems

SIST EN 2591-428:2004

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 2591-428

June 2002

ICS 49.060

English version

**Aerospace series - Elements of electrical and optical connection
- Test methods - Part 428: Sinusoidal vibrations with passage of
current for crimped terminal lugs**

Série aérospatiale - Organes de connexion électrique et
optique - Méthodes d'essais - Partie 428: Vibrations
sinusoïdales avec passage de courant pour cosses serties

Luft- und Raumfahrt - Elektrische und optische
Verbindungselemente - Prüfverfahren - Teil 428: Vibration,
sinusförmig bei Stromfluß für gecrimpte Kabelschuhe

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 2591-428:2002) 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 December 2002, and conflicting national standards shall be withdrawn at the latest by December 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 for determining the ability of crimped terminal lugs to withstand sinusoidal vibrations when a current is passing through them.

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 2591-403	Aerospace series – Elements of electrical and optical connection – Test methods – Part 403 : Sinusoidal and random vibration ²⁾
TR 4257	Aerospace series – Elements of electrical and optical connection – Relationship between the numbering systems for parts of EN 2591 ³⁾

3 Preparation of specimens

The specimens shall be fitted with their normal accessories, wired up in accordance with the technical specification.

The following details shall be specified in the technical specification:

- number of specimens;
- type of cable;
- installation and wiring of specimens;
- initial measurements and requirement.

4 Equipment

In accordance with EN 2591-403.

5 Method

5.1 Initial measurements

These shall be carried out in accordance with the technical specification.

5.2 Level

The vibration test level shall be given by combining five parameters: frequency range, vibration amplitude, duration of the endurance test, ageing temperature and current.

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

EN 2591-428:2002 (E)

5.2.1 Frequency range

10 Hz to 2 000 Hz.

5.2.2 Vibration amplitude

Below certain frequencies called transition frequencies, amplitudes shall be specified by constant displacement, whilst above these frequencies amplitudes shall be specified by constant acceleration. The values to be applied are 0,75 mm, 15 gn, unless otherwise specified in the technical specification.

5.2.3 Duration of test

The entire frequency range from 10 Hz to 2 000 Hz and back to 10 Hz shall be run through in 20 min. This cycle shall be carried out 12 times in each of three directions at right angles to each other (i.e. 36 times in total), so that the total duration of the test is approximately 12 h.

5.2.4 Ageing current

During vibration a current enabling the ageing temperature (maximum temperature sustained by the cable) to be reached in the cable core shall be passed through the sample. The ageing current shall be determined for each type of cable.

5.3 Assembly

The assembly shall be specified in the technical specification.

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