



SLOVENSKI STANDARD
SIST EN 3841-506:2005

01-april-2005

Aeronavtika - Odklopniki - Preskusne metode - 506. del: Lastnosti vibracij

Aerospace series - Circuit breakers - Test methods - Part 506: Vibration performance

Luft- und Raumfahrt - Schutzschalter - Prüfverfahren - Teil 506: Schwingungsverhalten

Série aérospatiale - Disjoncteurs - Méthodes d'essais - Partie 506 : Tenue aux vibrations

Ta slovenski standard je istoveten z: EN 3841-506:2004

SIST EN 3841-506:2005
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ICS:

49.060 Štečajski aparatni sistemski oprema za letalsko in vesoljsko opremo in sisteme
Aerospace electric equipment and systems

SIST EN 3841-506:2005

en

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EUROPEAN STANDARD

EN 3841-506

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2004

ICS 49.060

English version

**Aerospace series - Circuit breakers - Test methods - Part 506:
Vibration performance**Série aérospatiale - Disjoncteurs - Méthodes d'essais -
Partie 506 : Tenue aux vibrationsLuft- und Raumfahrt - Schutzschalter - Prüfverfahren - Teil
506: Schwingungsverhalten

This European Standard was approved by CEN on 10 September 2004.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG**Management Centre: rue de Stassart, 36 B-1050 Brussels**

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Foreword

This document (EN 3841-506:2004) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-STAN).

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 June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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1 Scope

This standard specifies a method of verifying the vibration performance of circuit breakers.

It shall be used together with EN 3841-100.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7137, *Aircraft – Environmental conditions and test procedures for airborne equipment*

EN 3841-100, *Aerospace series – Circuit breakers – Test methods – Part 100: General*

MIL-STD-810F, *Environmental engineering considerations and laboratory tests* ¹⁾

3 Method

3.1 Mounting

The circuit breakers shall be mounted on the vibrator according to 4.2 and 4.3 of EN 3841-100. The means of mounting shall be designed so as to transmit vibrations over the whole frequency range without absorption or natural resonance.

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The electrical connection shall be made with the cables of the sections specified in EN 3841-100, Table 1. The connection cables shall be attached to the vibration support approximately 100 mm from the terminals. The circuit breakers and the cables shall be mounted with the torque indicated in the product standard.

3.2 Procedure

The circuit breakers shall be subjected to:

- the sinusoidal vibration test according to ISO 7137, test procedure 2.2;
- the random vibration test according to ISO 7137, test procedure 2.2;
- sinusoidal vibration test at low frequencies according to ISO 7137, test procedure 2.2;
- the gunfire vibration test according to MIL-STD-810F, method 519.3, if specified.

The test shall be carried out in three mounting positions along the main axis of the circuit breakers, in the closed and open position.

The test conditions and vibration values shall conform to the technical specification.

1) Published by: Department of Defense (DOD), the Pentagon, Washington D.C. 20301 USA.

The test periods at sinusoidal vibration shall include determination of the resonant frequencies and a period to be determined as follows:

- resonance: if applicable, 30 min per resonance;
- sweep: remainder of total time specified.

During the test the contacts do not close for a period $\geq 10 \mu\text{s}$ (circuit breakers in the open position) or open for a period $\geq 10 \mu\text{s}$ (circuit breakers in the closed position).

3.3 Requirement

Requirements in accordance with technical specification and product standard.

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