



SLOVENSKI STANDARD SIST EN 2349-413:2009

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Aerospace series - Requirements and test procedures for relays and contactors - Part 413: Vibration, sinusoidal and random

Luft- und Raumfahrt - Anforderungen und Prüfverfahren für Relais und Schaltschütze - Teil 413: Sinus- und rauschförmig Schwingungen

Série aérospatiale - Exigences et méthodes d'essais des relais et contacteurs - Partie 413 : Vibrations sinusoidales et aléatoires

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Ta slovenski standard je istoveten z: EN 2349-413:2007

ICS:

49.060 Š^cp \ æš Ą^• [|b \ æ Aerospace electric
^|\ dā } æł] !^ { æš Ą ã c^ { ã equipment and systems

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 2349-413

April 2007

ICS 49.060

English Version

Aerospace series - Requirements and test procedures for relays and contactors - Part 413: Vibration, sinusoidal and random

Série aérospatiale - Exigences et méthodes d'essais des
relais et contacteurs - Partie 413 : Vibrations sinusoidales
et aléatoires

Luft- und Raumfahrt - Anforderungen und Prüfverfahren für
Relais und Schaltschütze - Teil 413: Schwingen, sinus- und
rauschförmig

This European Standard was approved by CEN on 19 May 2006.

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 CEN 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

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Foreword

This document (EN 2349-413:2007) has been prepared by the AeroSpace and Defense Industries Association of Europe - Standardization (ASD-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 ASD, 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 October 2007, and conflicting national standards shall be withdrawn at the latest by October 2007.

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

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EN 2349-413:2007 (E)**1 Scope**

This standard specifies a method for checking the capability of relays and contactors to withstand sinusoidal and random vibrations. It shall be used together with EN 2349-100.

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.

EN 2349-100, *Aerospace series — Requirements and test procedures for relays and contactors — Part 100: General requirements* ¹⁾

EN 2349-301, *Aerospace series — Requirements and test procedures for relays and contactors — Part 301: Pick-up and drop-out voltage*

EN 2349-303, *Aerospace series — Requirements and test procedures for relays and contactors — Part 303: Dielectric strength*

EN 2349-304, *Aerospace series — Requirements and test procedures for relays and contactors — Part 304: Operate and release time*

EN 2349-305, *Aerospace series — Requirements and test procedures for relays and contactors — Part 305: Bounce time*

EN 2349-307, *Aerospace series — Requirements and test procedures for relays and contactors — Part 307: Contact voltage drop*

EN 2349-309, *Aerospace series — Requirements and test procedures for relays and contactors — Part 309: Exported spikes*

EN 2349-412, *Aerospace series — Requirements and test procedures for relays and contactors — Part 412: Seal*

ISO 7137:1995, *Aircraft — Environmental conditions and test procedures for airborne equipment* ²⁾

3 Method**3.1 Mounting**

Mounting of the relay or contactor on the vibrator table shall be rigid, so that the vibrations produced can be transmitted directly to the test sample without absorption or resonance.

The electrical connections shall be wired in accordance with the product standard. The wires shall be secured to the vibrator as close as possible to the point of electrical connection.

1) In preparation at the date of publication of this standard.

2) Endorsement of publications EUROCAE/ED-14 and RTCA/DO-160.

3.2 Procedures

The relay or contactor shall be subjected to a sinusoidal vibration test in accordance with ISO 7137.
For test conditions, see product standard.

The relay or contactor shall be subjected to a random vibration test in accordance with ISO 7137.
For test conditions, see product standard.

4 Requirements

The torque for the connections and attachments shall not be less than 80 % of the rated value.

No opening of closed contacts for longer than 10 μ s.

No closing of open contacts for longer than 1 μ s.

Test in accordance with EN 2349-301, EN 2349-303, EN 2349-304, EN 2349-305, EN 2349-307, EN 2349-309, and EN 2349-412.

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