



**SLOVENSKI STANDARD**  
**SIST EN 61587-5:2014**

**01-julij-2014**

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**Mehanske konstrukcije za elektronsko opremo - Preskusi za IEC 60917 in IEC 60297 - 5. del: Potresni preskusi za šasije, okvire in vtične enote (IEC 61587-5:2013)**

Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 - Part 5: Seismic tests for chassis, subracks, and plug-in units

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Structures mécaniques pour équipement électronique - Essais pour la CEI 60917 et la CEI 60297 - Partie 5: Essais sismiques pour châssis, bacs et unités enfichables

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Mehanske konstrukcije za elektronsko opremo

Mechanical structures for electronic equipment

**SIST EN 61587-5:2014**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 61587-5**

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English version

**Mechanical structures for electronic equipment -  
Tests for IEC 60917 and IEC 60297 -  
Part 5: Seismic tests for chassis, subracks and plug-in units  
(IEC 61587-5:2013)**

Structures mécaniques pour équipement  
électronique - Essais pour la CEI 60917 et  
la CEI 60297 -  
Partie 5: Essais sismiques pour châssis,  
bacs et unités enfichables  
(CEI 61587-5:2013)

Mechanische Bauweisen für elektronische  
Einrichtungen - Prüfungen für IEC 60917  
und IEC 60297 -  
Teil 5: Seismische Prüfungen für  
Einschübe, Baugruppenträger und  
steckbare Baugruppen  
(IEC 61587-5:2013)

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 48D/549/FDIS, future edition 1 of IEC 61587-5, prepared by SC 48D, "Mechanical structures for electronic equipment", of IEC/TC 48, "Electromechanical components and mechanical structures for electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61587-5:2014.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-10-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-01-14

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-6	-	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
IEC 60068-2-47	-	Environmental testing - Part 2-47: Tests - Mounting of specimens for vibration, impact and similar dynamic tests	EN 60068-2-47	-
IEC 60068-2-57	-	Environmental testing - Part 2-57: Test methods - Test Ff: Vibration - Time-history & sine-beat method	EN 60068-2-57	-
IEC 60068-3-3	-	Environmental testing - Part 3: Guidance - Seismic test methods for equipments	EN 60068-3-3	-
IEC 60297	-	Dimensions des structures mécaniques de la série de 482,6 mm (19 in)	-	-
IEC 60297-3-101	-	Mechanical structures for electronic equipment - Dimensions of mechanical structures of the 482,6 mm (19 in) series - Part 3-101: Subracks and associated plug-in units	EN 60297-3-101	-
IEC 60512-2-1	-	Connectors for electronic equipment - Tests and measurements - Part 2-1: Electrical continuity and contact resistance tests - Test 2a: Contact resistance - Millivolt level method	EN 60512-2-1	-
IEC 60721-2-6	-	Classification of environmental conditions - Part 2: Environmental conditions appearing in nature - Earthquake vibration and shock	HD 478.2.6 S1	-
IEC 60917 (Series)	-	Modular order for the development of mechanical structures for electronic equipment practices -	EN 60917 (Series)	-
IEC 61587-1	-	Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 series - Part 1: Environmental requirements, test set- up and safety aspects for cabinets, racks, subracks and chassis under indoor conditions	EN 61587-1	-
IEC 61587-2	-	Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 - Part 2: Seismic tests for cabinets and racks	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61587-3	-	Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 - Part 3: Electromagnetic shielding performance tests for cabinets and subracks	EN 61587-3	-

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# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Mechanical structures for electronic equipment – Tests for IEC 60917  
and IEC 60297 –  
Part 5: Seismic tests for chassis, subracks and plug-in units**

**Structures mécaniques pour équipement électronique – Essais pour la  
CEI 60917 et la CEI 60297 –  
Partie 5: Essais sismiques pour châssis, bacs et unités enfichables**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MECHANICAL STRUCTURES FOR ELECTRONIC EQUIPMENT –  
TESTS FOR IEC 60917 AND IEC 60297 –**
**Part 5: Seismic tests for chassis, subracks and plug-in units**

## FOREWORD

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International Standard IEC 61587-5 has been prepared by subcommittee 48D: Mechanical structures for electronic equipment, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

The text of this standard is based on the following documents:

FDIS	Report on voting
48D/549/FDIS	48D/553/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of IEC 61587 series, under the general title *Mechanical structures for electronic equipment – Tests for IEC 60917 and IEC 60297*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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## INTRODUCTION

This standard is based on IEC 61587-2: *Mechanical structures for electronic equipment – Tests for IEC 60917 and IEC 60297 – Part 2: Seismic tests for cabinets and racks* and ATIS-0600329:2008: *Network Equipment – Earthquake Resistance*.

This standard sets forth test setups, performance requirements, and acceptance criteria for determining the robustness of chassis, subracks, and associated plug-in units according to the IEC 60297 and IEC 60917 series that may provide a level of survivability and preserve functionality during and after a seismic occurrence (an earthquake). This standard does not replace regional seismic system, installation standards, or specifications.

The intent of this standard is to provide a common methodology to perform and report seismic test conformance of chassis, subracks, and plug-in units according to the IEC 60297 and IEC 60917 series within a specified weight category. Mass distribution is based on the intended use. The terms “intended use” or “simulation of service condition” or “worst-case simulated configuration” are widely used in the telecom industry but also in the electronics industry.

Seismic ground motion occurs simultaneously and randomly in all directions. Single-axis or tri-axis tests may be selected to simulate the seismic environment for testing.

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