BS EN 61587-3:2013

BSI Standards Publication

# Mechanical structures for electronic equipment — Tests for IEC 60917 and IEC 60297

## Part 3: Electromagnetic shielding performance tests for cabinets and subracks



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## National foreword

This British Standard is the UK implementation of EN 61587-3:2013. It is identical to IEC 61587-3:2013. It supersedes BS EN 61587-3:2006 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/48, Electromechanical components and mechanical structures for electronic equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.



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**Compliance with a British Standard cannot confer immunity from legal obligations.**

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English version

# Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 - Part 3: Electromagnetic shielding performance tests for cabinets and subracks

(IEC 61587-3:2013)

Structures mécaniques pour équipment électronique -
Essais pour la CEI 60917
et la CEI 60297 -
Partie 3: Essais de performances du blindage électromagnétique pour les baies et les bacs à cartes
(CEI 61587-3:2013)

Mechanische Bauweisen für elektronische Einrichtungen -
Prüfungen für IEC 60917 und IEC 60297 -
Teil 3: Schirmdämpfungsprüfungen für Schränke und Baugruppenträger
(IEC 61587-3:2013)

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CENELEC

European Committee for Electrotechnical Standardization
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Europäisches Komitee für Elektrotechnische Normung

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



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## Foreword

The text of document 48D/527/FDIS, future edition 2 of IEC 61587-3, 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 61587-3:2013.

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) | 2013-12-13 |
| • latest date by which the national standards conflicting with the document have to be withdrawn | (dow) | 2016-03-13 |

This document supersedes EN 61587-3:2006.

EN 61587-3:2013 includes the following significant technical changes with respect to EN 61587-3:2006:

EN 61587-3:2013 corrects the errors of EM code descriptions and the frequency range for the shielding performance is extended up to 3 000 MHz.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

## Endorsement notice

The text of the International Standard IEC 61587-3:2013 was approved by CENELEC as a European Standard without any modification.

# 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.

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| IEC 60297 | Series | Dimensions of mechanical structures of the 482,6 mm (19 in) series | HD 493 | Series |
| IEC 60917 | Series | Modular order for the development of mechanical structures for electronic equipment practices | EN 60917 | Series |
| IEC 61000-4-3 | - | Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test | EN 61000-4-3 | - |
| IEC 61000-5-7 | - | Electromagnetic compatibility (EMC) - Part 5-7: Installation and mitigation guidelines - Degrees of protection by enclosures against electromagnetic disturbances (EM code) | EN 61000-5-7 | - |
| CISPR 16-1 | Series | Specification for radio disturbance and immunity measuring apparatus and methods | EN 55016-1 | Series |

CONTENTS

1 Scope and object ..... 5
2 Normative references ..... 5
3 Electromagnetic shielding performance test ..... 6
3.1 Electromagnetic shielding performance tests for cabinets and subracks ..... 6
3.2 Test condition ..... 6
3.3 Test configuration ..... 6
3.3.1 Calibration of the reference antenna ..... 6
3.3.2 Transmitting antenna ..... 6
3.3.3 Receiving antenna ..... 6
3.3.4 Reference measurement ..... 7
3.3.5 Transmitting antenna set-up ..... 7
3.3.6 Test specimen set-up ..... 7
3.4 Test requirements ..... 7
3.5 Test results ..... 8
3.5.1 General ..... 8
3.5.2 Open field test sites ..... 9
3.5.3 Semi-anechoic or full anechoic chambers ..... 10
Annex A (informative) Examples of SDA-antenna and measurement ..... 12

Figure 1 – Typical test equipment configuration ..... 8
Figure 2 – Example of a measurement data presentation ..... 9
Figure 3 – Set-up for measurement of reference field strength $E_1$ ..... 9
Figure 4 – Set-up for measurement of reference field strength $E_2$ (cabinet) ..... 10
Figure 5 – Set-up for measurement of reference field strength $E_2$ (subrack) ..... 10
Figure 6 – Set-up for measurement of reference field strength $E_1$ ..... 10
Figure 7 – Set-up for measurement of reference field strength $E_2$ (cabinet) ..... 11
Figure 8 – Set-up for measurement of reference field strength $E_2$ (subrack) ..... 11
Figure A.1 – A pictorial view of a SDA ..... 12
Figure A.2 – The SDA system ..... 12
Figure A.3 – Transmission property of E/O-O/E ..... 13
Figure A.4 – Measurement system for transmission property of E/O-O/E ..... 13
Figure A.5 – Measurement results ..... 14
Figure A.6 – Measurement setup at a measurement site ..... 14

Table 1 – Electric field attenuation levels ..... 8

# MECHANICAL STRUCTURES FOR ELECTRONIC EQUIPMENT – TESTS FOR IEC 60917 AND IEC 60297 –

## Part 3: Electromagnetic shielding performance tests for cabinets and subracks

## 1 Scope and object

This part of IEC 61587 specifies the tests for empty cabinets and subracks concerning electromagnetic shielding performance, in the frequency range of 30 MHz to 3 000 MHz. Stipulated attenuation values are chosen for the definition of the shielding performance level of cabinets and subracks for the IEC 60297 and IEC 60917 series. The shielding performance levels are chosen with respect to the requirements of the typical fields of industrial application. They will support the measures to achieve electromagnetic compatibility but cannot replace the final testing of compliance of the equipped enclosure.

The purpose of this standard is to ensure physical integrity and environmental performance of cabinets and subracks, taking into account the need for different levels of performance in different applications. It is intended to give the user a level of confidence in the selection of products to meet his specific needs. This standard in whole or in part applies only to the empty enclosures, for example cabinets and subracks according to IEC 60297 and IEC 60917 and does not apply to the enclosures when electronic equipment is installed. Chassis may be tested in the same way as subracks and cases may be tested in the same way as cabinets.

This standard was developed in close relationship to IEC 61000-5-7 but with the specific focus on subracks and cabinets and the determination of performance levels at the chosen frequency range.

## 2 Normative references

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.

IEC 60297 (all parts), *Mechanical structures for electronic equipment – Dimensions of mechanical structures of the 482,6 mm (19 in) series*

IEC 60917 (all parts), *Modular order for the development of mechanical structures for electronic equipment practices*

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-5-7, *Electromagnetic compatibility (EMC) – Part 5-7: Installation and mitigation guidelines – Degrees of protection provided by enclosures against electromagnetic disturbances (EM code)*

CISPR 16-1 (all parts), *Specification for radio disturbance and immunity measuring apparatus and methods*